EPISTEMOLOGICAL REALISM

AND

METAPHYSICAL PLURALISM

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MARCH, 1960 DONALD L.C. MACLACHLAN.

Preface.

The title indicates the two main positions to be established in this thesis. Epistemological Realism is the doctrine that the experiencing subject experiences real, external beings which lie beyond his own existence. Metaphysical Pluralism is the doctrine that in the universe there are many substantial beings.

Epistemological Realism and Metaphysical Pluralism are both plausible, because they are in accordance with natural common sense beliefs. We naturally believe that we experience external beings. And although the distinction between substances, attributes of substances, and aggregates of substances is not explicit at the level of common sense, it is natural to suppose that one is oneself a real unit of existence, more real than any of the qualities one possesses, and more real than any group in which one may be included. Since one also believes that there are external things, it follows that one is supposing that there is a plurality of ultimate units of existence.

These common sense beliefs are the main evidence in favour of Epistemological Realism and Metaphysical Pluralism. For common sense beliefs are the natural expression and verbal articulation of experience. Common sense beliefs are not, however, beyond criticism. Philosophical reflection may

disclose considerations which show that the common sense description of experience must be inaccurate. Therefore, if one wishes to rely on these common sense beliefs, one must answer any philosophical criticisms of them.

Our first task is to answer the objection that the subject does not experience external objects, since the contents presented to consciousness are not real qualities of external beings. Then we must reply to the objection that Metaphysical Pluralism must be false, since a plurality of independent substances is impossible.

But we wish to do more than reach the bare conclusion that there are many substances and that the subject experiences external objects. We wish to give a more detailed account of the general structure of the universe. The remainder of the thesis is devoted to an attempt to construct a coherent system which fits the facts of experience and, in particular, to suggest an explanation of the subject's awareness of external objects in terms of this general metaphysical system.

Our purpose is to attempt a general description of the universe in which we live on the basis of the evidence of experience. We accept the universe of finite beings as a given fact: we are not attempting to discover either the reason for its peculiar character or the reason for its x existence. The existence of finite beings poses a problem which may or may not be genuine, but the examination of this problem is beyond the scope of the present discussion.

This thesis has, of course, been influenced, positively or negatively, by the writings of many philosophers who have dealt with the problems discussed, but the chief debt is probably due to A.N. Whitehead. There are certain similarities between the system which we defend and the system elaborated by Whitehead in Process and Reality. For instance, substance, as we interpret it, is similar to Whitehead's "actual entity", and the fundamental relation which we suppose to connect independent substances is not unlike Whitehead's "prehension". But we are making an independent investigation of the problem, and we are not relying in any way on what Whitehead claims to have established.

The first chapter is preliminary to the main argument. It is an attempt to clarify the notion of "substance", which plays such an important part in the discussion, and to explain the controversy between Monists and Pluralists.

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CHAPTER ONE.

THE ONE AND THE MANY.

Metaphysical Pluralism is one of the two main positions which we wish to defend in this work. We are subscribing to the proposition that there are many beings and we are rejecting Metaphysical Monism, the doctrine that there is only one real being. This means that one of the fundamental questions which we have to decide is the age-old problem of the One and the Many. Is reality one single being, or are there many real beings?

This is at first sight a peculiarly puzzling question, because although it seems plausible to maintain that the real must be either one or many and not both, yet experience appears to forbid the denial of either the unity or plurality of being. In experience we so obviously encounter a manifold; and on the other hand we do not doubt but that everything we experience exists in the one world. And as a matter of fact, very few philosophers have been prepared to go so far as to deny outright the existence of either the One or the Many. To find examples of an extreme Pluralist who will deny the One and of an extreme Monist who will deny the Many, one has to take philosophers so widely separated in time as Wittgenstein and Parmenides. These extreme positions cannot simply be ignored, but there are very simple objections against both views which seem

sufficiently conclusive.

We shall take first the representative of extreme Pluralism, the doctrine propounded by Wittgenstein in the Tractatus Logico-Philosophicus. Wittgenstein argues that the only ultimate realities are what he calls "atomic facts". The opening proposition of his book is indeed, "The world is the totality of atomic facts", but by the end of his work he has made quite clear that for him there is no such thing as a single totality of all atomic facts and that the conception of a world is a strictly meaningless notion which refers to nothing real. He makes use of this notion only in order to bring the reader to an understanding of his position. Once this understanding is achieved, the reader will realise that the notion is without any literal significance.

But how is it possible to have a theory which cannot permit its own statement and which must in the end withdraw the propositions which are required in order to convey what is intended? This is a question to which Wittgenstein has given no satisfactory answer. And our natural distrust of Wittgenstein's unusual procedure is intensified when we suspect that the reason why Wittgenstein employs so mysterious a method is that he hopes in this way to evade an objection which is otherwise fatal to any form of radical pluralism. Wittgenstein wishes to assert the reality of many entities, the atomic facts, while denying the reality of any unity of

these entities. But this is not possible. As Bradley has pointed out,* it is impossible to assert the reality of many beings without at the same time admitting the reality of the totality of these many beings. One cannot even form any conception of a plurality without at the same time conceiving the unity of that plurality. Abstract the unity, and you are left not with the plurality, but at best with mere being. This is the basic objection against any attempt to dispense with the unity of the world.

Thus, Wittgenstein has an ambiguous attitude towards a proposition like "The world is the totality of atomic facts", because, Although he requires some such proposition in order to maintain the plurality of atomic facts, he wishes to evade the implication that there is a single real world. In the end, Wittgenstein takes refuge in silence**, but it now seems that this silence is imposed not because the ultimate nature of reality is impenetrable to thought and language, but because Wittgenstein wishes to defend a view which cannot even be consistently expressed.

The theory of Parmenides is at the other extreme. He denies all plurality and all distinction within the One. But how can one deny outright the existence and reality of that diversity and multiplicity which is so clearly present in experience? The Many may perhaps be degraded to the level

* cf. Appearance and Reality, 4th impression, p.141.
** "Whereof one cannot speak, thereof one must be silent". Tractatus Logico-Philosophicus, 7.

of mere appearances, but they may not be completely deprived of existence. Appearances certainly exist, and they must be granted some degree of reality: they are not nonentities and they must be accounted for. It is quite illegitimate for a philosophical theory to rule out dogmatically the element of multiplicity in reality.

One cannot solve the problem, then, by refusing to recognise either the One or the Many: the reality of both must be admitted. Therefore, one must question the contention that the real cannot be both one and many. When this contention is subjected to critical scrutiny, it is seen to be quite unwarranted, to be, in fact, mere sophistry. What is there to prevent one from assenting to the natural view that there is one world which exists and which contains a plurality of elements which also exist? The claim is that one may not attribute to the real the contradictory predicates, unity and plurality. But is it in fact a contradiction to assert that reality is both one and many? It is indeed a contradiction to assert both that there is but one chair in a certain room and that there are many chairs in the room. This is because there is no ambiguity about what is to count as a unity in the case of chairs. But in the case of reality, there is no established convention which determines what is to count as a unit: the real cannot be unambiguously enumerated. One may take as a unity reality as a whole: or one may take as a unit each distinguishable element in reality. In order

to do justice to the nature of the real, we must take account of both these alternative modes of enumeration. The fact that reality may be counted in these different ways is what permits us and indeed requires us to say that reality is both one and many.

Now, if the existence of both the One and the Many must be admitted, what can be at stake in the debate between Monism and Pluralism? Is the solution to this ancient controversy simply that both parties are right in what they affirm and wrong in what they deny? But apart from extremists such as Parmenides and Wittgenstein, Monists and Pluralists alike are perfectly agreed that both the One and the Many <u>are</u>, in some sense. What the Monists are concerned to maintain is that there is a special sense of being according to which the One is and the Many are not; whereas the Pluralists hold that according to this special sense of being each of the Many is and the One, their unity, is not. This means that in order to understand the issue between Monism and Pluralism, one must distinguish different senses of being.

Plato recognised the significance of the fact that being has several senses, but Aristotle was the first to attempt a systematic classification. The various senses of being distinguished by Aristotle are not all on the same level. There is one type of being which has a special position. Aristotle calls this kind of being "οὐσία". "οὐσία" is being in the primary sense. "οὐσία" is primary because it

exists absolutely and independently. All other types of being are essentially relative to some "οὐσία" which is responsible for their existence. "Not one of them by nature has an independent existence or can be separated from its 'οὐσία'."*

"Οὐσία" is usually translated "substance", although some have seriously questioned the appropriateness of this translation. Mrs Ellen Stone Haring favours a transliteration of the Greek, because "substance" suggests something standing under something else, which is nearest in meaning to the Greek "ὑποκείμενον", not to the much more comprehensive "οὐσία".** Father Owens, after a very detailed and scholarly discussion, decides for "entity".*+ But "substance" is the term which has been traditionally used to denote being in the primary sense, and we see no reason to object to this term provided that one is careful not to take for granted any of the various special meanings which the term has acquired throughout the history of philosophy. For example, one must not assume with Kant that substance is the permanent substratum of change.++

It is being in the sense of substance which Monists affirm to be one and which Pluralists affirm to be many. The Monists maintain that the One is the only substance and that the Many

* Aristotle, Metaphysics Z 1, 1028a 23-24, translated by H. Tredennick.
** Substantial Form in Aristotle's Metaphysics z, Review of Metaphysics, Vol. X, No.2, p.308.
*+ The Doctrine of Being in the Aristotelian Metaphysics.
++ cf. Critique of Pure Reason, First Analogy of Experience.

are mere parts of substance, elements of substance, aspects of substance, qualities of substance, modes of substance, or adjectives of substance. The Pluralists hold that there are many substantial beings and that the aggregate constituted by these beings is no substance, but depends for its reality upon its substantial components.

Most philosophers would be willing to admit the existence and the philosophical importance of a primary type of being such as is described above, even if some would be reluctant to call it "substance". But those who are prepared to recognise the concept of substance are by no means all agreed about its exact definition. There are, however, certain features of substance which are fairly generally acknowledged. If we can point out these features, this will serve as a preliminary description and clarification of this very fundamental notion.

Most philosophers would agree with Aristotle that substance is primary in reality, that it exists absolutely and separately, and that it does not depend on anything else in the way in which its attributes depend upon it--a substance is a self-existent being.

Another characteristic which would usually be attributed to substance is indivisibility--a substance is an indivisible unity. This does not mean that a substance is absolutely simple and without parts--it means only that a substance cannot be divided into parts which are themselves substances.

Since a substance is a definite unit, it follows that substances may be unambiguously enumerated, so that Monism and Pluralism are exclusive alternatives: there must be either one substance, or else many substances. Moreover, the indivisibility of substances rules out a type of Pluralism which is in effect a compromise between Monism and Pluralism. This type of Pluralism would maintain that there are many substances, one of which is in a special position, since it is a whole comprising all the others. But since substance is indivisible, if a whole is substance its parts cannot be substances, and parts which are substances cannot make up a substantial whole.

Most philosophers would also agree that substances are particular and concrete and that each substance is a unique individual which can never be repeated. What is abstract cannot be substance; for the abstract is posterior to the concrete from which it has been abstracted, whereas substance is prior to all other kinds of being. These features are not, however, peculiar to substance, since certain attributes of substance are also concrete, unique, and particular.

But although many philosophers would be prepared to subscribe to the above account of substance, they would not all mean precisely the same thing by the terms employed, and the underlying differences of opinion would be revealed as soon as one attempted to give a more exact definition. In particular, Monists and Pluralists would diverge widely in their interpretation of the above description. This fact

complicates the debate between the two parties: indeed, the different answers given by Monists and Pluralists to the question, "Is substance one or many?", seem to depend in large measure on the different meanings of substance which are assumed.

To illustrate this point, let us take the characteristic of independence: Monists and Pluralists alike are agreed that substantial beings have some sort of independence. But Monists understand the independence of substance in such a way that it follows that there can be only one substantial being. They argue that a substance must have an absolute independence which is incompatible with its relation to anything beyond itself. But unless one is prepared to undertake a defence of Leibniz's windowless monads, one must admit that the many beings in the world which a Pluralist would consider to be substances are related to one another. Therefore, Pluralists must attempt to give an account of substantial independence which makes clear that the independence of substances is not incompatible with their interrelationships. This is not an easy task.

The celebrated Cartesian definition that a substance is " a thing which exists in such a way as to stand in need of nothing beyond itself in order to its existence"* will not do. Descartes himself was immediately compelled to modify this

* Descartes, The Principles of Philosophy, Part I, LI, translated by Veitch.

definition: the criteria were so stringent that only God could satisfy them. He therefore admitted substances of a second type, defined as "things which, in order to their existence, stand in need of nothing but the concourse of God".* But Pluralists cannot accept even the revised Cartesian definition. For it is difficult to deny that the many beings in the world which a Pluralist would wish to call substantial require and depend upon one another. Human beings are surely substances, if any finite beings are, yet they obviously require for their existence many things beyond themselves.

Therefore, a Pluralist must show in some other way how the independence of substances is to be reconciled with their relations to one another. In a later chapter,** we shall endeavour to do this by making use of the temporality of the beings in the world.

The difference between Monism and the type of Pluralism we wish to recommend is, however, even more radical than that the opposed views employ different definitions of substance. There is a fundamental difference in approach. The usual method of the Monists is to assume a certain definition of substance, and then to show that according to this definition a plurality of substances is impossible. The definition assumed by the Monists is not, of course, arbitrary: it is based on a supposed rational insight into the nature of substance.

* = ibid., Part I, LII.
** Chapter VI

We may call the approach used by the Monists a Rationalist approach.

The proper approach for a Pluralist is, on the other hand, an empirical one. The case for Pluralism rests not on a rational intuition of the nature of substance, but on a certain experience. This experience is the fundamental awareness of every subject that he is a substantial being existing in a world of other substantial beings. The claim is that it is one's awareness of the nature of one's own being and of the beings which surround one which provides the notion of substance, that substance is to be defined ostensively by referring to the many beings which we discern in this fundamental experience.

If this claim were absolutely incontestable, then Monism could be ruled out without further discussion. If substance must be ostensively defined in a situation in which we see that there are many substances, then any verbal definition which cannot allow that there are many substances must be mistaken and is automatically excluded.

This fundamental experience of the plurality of substances does not, however, have that clarity and self-evidence which would allow one to discount in advance all possible criticisms of Metaphysical Pluralism. Therefore, Pluralists must be prepared to give a specific reply to any criticisms which their opponents might make. Pluralists, however, are initially in a strong position. One may not have an infallible

intuition of the plurality of substances, but there is a certain primitive awareness that there are many substantial beings which it is not easy to disregard. It requires, indeed, an effort of abstraction and philosophical reflection to formulate an explicit proposition such as "There are many substantial beings", but an awareness of many substances is rarely, if ever, absent from conscious experience. The plain man's instinctive support of Pluralism against Monism testifies to the prevalence of an intuition of the plurality of substantial beings, in however inarticulate a form.

Therefore, since it is the Monistic theory which is at variance with the apparent facts, it must bear the onus of proof. The Monist must prove that the apparent plurality of substances is an illusion. But so long as no objections are brought against his fundamental assertion that there are many substances, the Pluralist is free to devote his energies to articulating, developing, and elucidating the fundamental experience on which his position depends.

There are, however, certain forceful objections which make it impossible for the Pluralist to take for granted his fundamental thesis. There is an extremely radical objection which denies that a subject can experience beings beyond himself. The argument leads one to a very implausible version of Monism, viz. Solipsism, but it is an argument sufficiently well grounded in the undeniable fact of the subjectivity of experience to warrant careful examination.

A less radical but more formidable criticism of Metaphysical Pluralism is prepared to admit that a subject experiences a reality which extends beyond himself. But what the argument denies is that the self and any other beings which one identifies beyond the self are substances. We have seen that it is impossible to conceive of a plurality of beings which do not somehow form a unity. The Monistic argument is that this unity is prior to its constituents, so that it is the unity which is substantial and not its many components.

The most satisfactory reply to this criticism is to develop a system of Metaphysical Pluralism which will show how the unity of the world is derived from the many beings in the world in such a way that it is posterior and not prior to them. The problem is essentially the same as a problem which we have already noticed--the problem of reconciling the relatedness and the independence of the beings in the world.

But a brief reply to these criticisms is impossible, and it will be necessary to devote a large part of this thesis to their refutation. We shall begin by attempting to establish the second main position which we are defending in this thesis, Epistemological Realism. In this way, we shall answer objections against Metaphysical Pluralism from the side of Solipsism. Then, we must try to deal with the objection that the experiencing subject and the things which he experiences beyond himself are not ultimate substances.

CHAPTER TWO.

NAIVE REALISM.

I. Now that the various senses of being have been distinguished, the central contention of Metaphysical Pluralism may be restated as follows: "There are many substantial beings." We have seen that this contention depends for support almost entirely upon common sense and ordinary experience--the experience of every subject that he exists and that other beings exist in a world external to him. But as we noted towards the end of the last chapter, the validity of this experience may be questioned.

There is good evidence that what is actually given in experience is not at all what we ordinarily believe. A critical examination of experience reveals that what is presented to the subject is such that it cannot be even a part or constituent of the external objects assumed by common sense. But we shall attempt to show that the arguments which break down so much of the common sense picture of the world do not touch man's fundamental awareness of a reality beyond himself. One may identify in experience certain elements which do not have the objective reality which the plain man would unthinkingly ascribe to them; but it does not follow from this that no experience of an external world is possible. In the present chapter, we shall work through the main arguments

which have been used to prove that what is given in experience is subjective. We shall agree that perceptual errors, the distortions of perspective, and so on show that there is an element in experience which cannot be a property of an external reality. This element may be called the "content" of experience. But we shall contend that none of these arguments compels one to admit that a percipient subject can have no experience whatsoever of an external and objective reality.

The arguments which establish the subjectivity of the content of experience are often developed as a criticism of the epistemological theory called Naive Realism. We shall follow the normal procedure and take Naive Realism as the focus of our discussion. Naive Realism is not a view which any reputable philosopher would defend. Indeed, the defects of this theory are so obvious that one could hardly state it with any precision without becoming conscious of its shortcomings. But it is a useful starting point, and by a criticism of this position, one may gradually unfold the considerations which lead one to deny that the content of experience is objectively real.

Naive Realism is often considered to be the epistemological theory accepted by the plain man. But one may question the propriety of attributing to the plain man any particular epistemological view. The plain man, by definition, does not reflect; he is satisfied with ordinary experience; and ordinary experience would appear to be the neutral datum of epistemology

which all theoretical explanations must take account of and which does not imply any special epistemological theory--certainly not a false one. To attribute Naive Realism to the plain man is to damage without justification the reputation of common sense and ordinary experience; and since our metaphysical theory depends so largely on common sense, we must take time to defend its reputation.

It is, however, a natural mistake to suppose that Naive Realism is the epistemological theory of the plain man. The plain man as such has no theory of knowledge, but the plain man who turns philosopher is naturally drawn to Naive Realism, because of its simplicity, although he is not likely to remain long in this position without recognising its inadequacy.

The fundamental mistake of Naive Realism is that this theory fails to make a clear distinction between the content of experience and its external object. This confusion of content and external object leads the Naive Realist to misunderstand both the status of the content and the structure of the experience of external objects. The Naive Realist attributes to the content of experience the objective ontological status which can be legitimately assigned only to the external being which is the object of experience. And the Naive Realist maintains that the experience of an external object, like the awareness of a given content, is an immediate and unconditioned apprehension.

Before undertaking a detailed criticism of Naive

Realism, we shall attempt a preliminary clarification of the two fundamental notions which we have distinguished, viz. the content and the external object of experience. By the "content" of experience, we mean what has been variously called sense-data, appearances, presentations, phenomena, and so on. We mean such things as a patch of colour as it appears in visual perception, a sound as it is heard by a listener, and so on: we mean whatever qualities are immediately present to the experiencing subject.

By the external "object" of experience, we mean a real physical being independent of experience, which exists in a public world beyond the experiencing subject. Some philosophers--Berkeley is perhaps the most notorious--would question the existence of any such beings. But we shall not hesitate to assume the reality of beings in an external world throughout the discussion of the present chapter. The existence of external beings is never doubted by common sense, and should not be doubted by philosophers without very good cause. In this chapter, we shall show that one can account for the failings of Naive Realism without abandoning the Naive Realist belief in an external physical world. In the next chapter, we shall deal with the theory which attempts to escape the difficulties of Naive Realism by sacrificing the external world.

II. There are various versions of the Naive Realist position, some of which are more extreme than others. Since we are not attempting to give an accurate representation of the views of some actual school of philosophy, we may select as our starting point the version of Naive Realism which we find most convenient for dialectical purposes. The most extreme form of Naive Realism would maintain the absolute identity of the content and the external object of experience. This theory is so obviously mistaken that it can hardly be seriously entertained, but it is best to begin with the most extreme view and to introduce modifications as required.

A simple example will be enough to prove that one cannot completely identify the content and the external object of experience. When one sees a penny, the content of one's experience is not the penny as such. For neither the back nor the interior of the penny are presented in the visual perception. What is presented is no more than a part of the penny, namely its front surface. Thus, the content of experience is not by itself a physical thing in the external world. Common sense material objects are not presented bodily and in full.

But this argument does not damage any essential tenet of Naive Realism. It does not compel the Naive Realist to withdraw his view that the content of experience is objectively real. It shows that a content given in experience can be no more than a part or property of an external being. But a part of an external being has surely the same objective

reality as the being itself.

That the content of experience is objectively real is the first of the two principles of Naive Realism mentioned above. We shall postpone criticism of this principle until we have dealt with the second main contention of Naive Realism, that the experience of an external object is an immediate and unconditioned apprehension.

The Naive Realist believes that an experience is conditioned by two things only--an experiencing mind, and a physical being which is experienced. Moreover, the Naive Realist would keep the contributions of these two kinds of condition carefully segregated: the mind provides the subject of experience and the physical thing provides the object. But an empirical investigation reveals other conditions of experience. These other conditions are of two distinct kinds. There are physiological conditions: sense perceptions are possible only if the appropriate sense organs are functioning: the blind do not see, nor do the deaf hear. Therex are also physical conditions. The perception of an external object is possible only if the object is brought into contact with the sense organs or, in the case of the senses of sight, hearing, and smell, which function at a distance, if the nature of the physical reality intervening between the body and the perceived object is such as to permit the occurrence of the perception. One cannot see through a brick wall; one cannot hear across a vacuum; and if one is upwind from an object, one cannot smell it.

It is clear, then, that the occurrence of an experience depends on a variety of conditions. But these considerations cannot be taken to provide a conclusive refutation of the doctrine that the experience of an external object is an immediate apprehension. And it is this doctrine which is really vital to the Naive Realist position. It does not follow from the fact that an experience cannot occur without the co-operation of certain conditions that the experience, when it does occur, is other than an immediate grasp of the external object by the mind. It is not out of the question that the physical and physiological conditions of perception are merely what make possible a flash of intuition directly connecting the mind and an external being. In other words, these conditions of experience are not necessarily mediating conditions which bridge an otherwise insuperable gap between the mind and its object.

It is, however, much more plausible to suggest that the physical and physiological conditions operate by transmitting the quality of the external object to the mind, rather than by enabling the mind to lay hold of its object directly. And there is an argument which effectively closes the loop-hole through which the Naive Realist might otherwise escape. The evidence of science is that when there is a perception of some occurrence in the physical world, one can detect a definite route of activity leading from the external object to the brain.

For example, in the case of a flash of light, one can detect light rays leading from the source of light to the eye, and nerve impulses leading along the optic nerve to the brain. Now this route of activity connecting the mind and the external object is a process which it takes time to enact. Nerve impulses require time to travel along the nerves: even the transfer of light is not instantaneous. This means that the event which is supposed to be perceived must be in the past of the perceiving of it. And in the case of a very distant event, e.g. the explosion of a supernova, the event has occurred many millions of years before it is perceived. But how could the mind have an immediate access to what has happened in the remote past? For the past does not exist and what does not exist cannot be present to the mind. Therefore, the mind can have no direct intuition of the objects which it is supposed to perceive. For a knowledge of external objects, it is dependent on physical and physiological conditions which will transmit a communication from them.

If this argument is valid, the position of the Naive Realist is completely destroyed. For the refutation of the second principle of Naive Realism entrains the fall of the first principle. If the external object is not directly intuited, then the content presented in experience is not even a part of that object. For this content <u>is</u> directly intuited: and it is contemporary with the experience, not in its past.

But although one must admit a distinction between the

content of experience of which the subject is immediately aware and any part of an external object which is not directly intuited, yet one might save something from the wreck if one could maintain that in spite of the distinction, there is a certain identity between the immediate content of experience and an element in some external object. By admitting a distinction between the content of experience and its external object, one shifts one's position from Naive Realism to a version of the Theory of Representative Perception. But one will preserve a good deal of what the Naive Realist is most concerned to defend if one can maintain that the qualities presented in immediate experience are, in some sense, the same as the qualities which are constituents of external beings, although these qualities are directly experienced not as they exist in the external beings but only as they exist in the mind after having been transmitted from the external reality via an appropriate route of transmission. There are two possible ways in which the qualities of external things might be transmitted to the mind. One might take qualities to be entities which may persist through the lapse of time and amid changing circumstances, in much the same way as the traditional substances. Then one might claim that these qualities may be transported to the mind, the physical and physiological conditions of perception being, as it were, the vehicles which convey the quality from the external object. Alternatively, one may take qualities to be universal characteristics which

may make their appearance on a number of different occasions. The content of experience reproduces the universal quality of an external object, the physical and physiological conditions forming a chain, each link of which re-enacts the universal quality of its predecessor. The second alternative seems to give a much more plausible account, but whichever alternative is accepted, the result is about the same. Although it is possible that a chain of conditions transmits faithfully the qualities of external things, it is also possible that the members of this chain transmute and distort the qualities which they convey or re-enact.

One consideration which compels one to doubt seriously whether what emerges at the terminus of a route of transmission is ever the same as what was at its origin, is that the members of the chain are so radically different in nature. For example, when one perceives the redness of a tomato, at the origin of the chain of transmission there is the coloured surface of the physical thing, then the quality is taken up by a light ray of a certain frequency, then by the eye and the optic nerve and certain areas of the brain and it emerges as the redness which is directly present to consciousness. How could a quality survive unchanged through such vicissitudes? How could one entity reproduce exactly the universal character enacted by another radically different? To take a fairly mild example, how could light rays re-enact the character of the surface of a physical object? This argument may not prove

conclusively that the quality immediately presented is in no way the same as a quality of an external object, but it is nevertheless extremely powerful.

We have taken the line of argument which begins with the revelation that experience is subject to various conditions about as far as it will go. It is now time to consider the second main argument against Naive Realism which attempts to show, by a detailed examination of the content of experience, that this content cannot be a part of an external object.

III It is generally admitted that perceptions are sometimes mistaken. Now the existence of perceptual errors proves conclusively that in some cases at least the content of a perception is no feature of the external being to which it is attributed. Whether or not a true perception is an intuition of an objective quality of a physical thing, it is certain that a false perception is not. This fact disposes of an extreme Naive Realism which maintains that all experienced contents without exception are parts of external beings. But it is not difficult for a less extreme Naive Realist to modify this position by distinguishing true from false perceptions, maintaining that although the content of a true perception is part of an external being, the content of a false perception is not, and that this, indeed, is the criterion which distinguishes perceptions from misperceptions.

An investigation of the content of experience does not

provide so easy a refutation of this modified version of Naive Realism. Of course, the argument based on the conditioning of experience has the same force against this as against the more extreme form, and the discussion to follow will turn up considerations which will strengthen this argument. The main purpose of what follows, however, will be to construct independent arguments against Naive Realism. If an independent approach confirms the conclusion of our first argument, it will provide very valuable support. Moreover, an examination of the content of experience will do much to refute the simple form of the Theory of Representative Perception which the first argument could not completely dismiss.

It is certain that in some cases the content of experience is not a property of an external being. We shall attempt to show by a detailed investigation that it is very unlikely that the experienced content is ever objectively real. This conclusion is to be supported by an indirect argument to the effect that the contents of all experiences are fundamentally alike, so that one content cannot have an objective ontological status if another content is merely subjective.

Hallucinations are the most extreme class of perceptual mistakes. But the Naive Realist is not seriously disconcerted by their existence. Hallucinations do indeed prove that the content of experience is not always objectively real, but this is also shown by commoner phenomena, such as dreams. And it does not follow from this that the content of <u>perceptions</u>

is not objectively real; for a hallucination is not a perception. Hallucinations occur when, in unusual circumstances, a subject takes to be presented in perception what he has, in fact, imagined. Now imagination is sufficiently different from perception to make it quite plausible to attribute a different ontological status to the contents of these two types of experience (using experience in a broad sense). It is reasonable to maintain that what is imagined is merely a subjective creation of the mind, whereas what is perceived is an objective feature of reality. It requires a serious breakdown of rationality, e.g. in cases of intoxication or insanity, before there is any risk of confusing the products of imagination and perception.

The existence of illusions creates a more serious difficulty for the Naive Realist. Again he may claim that an illusion is not a genuine perception and that the subjectivity of the contents of illusions is not incompatible with the objectivity of the contents of perceptions. But it is much less plausible to attribute a different ontological status to the contents of veridical and <u>illusory</u> experiences. For illusions are not produced by a confusion between imagination and perception, but in some other way. Therefore, there is not the same justification as there is in the case of hallucinations for making a radical distinction in ontological status between the contents of illusions and the contents of veridical perceptions. There seems to be an inherent difference

between what we imagine and what we perceive--a difference which is obvious on introspection--but there is no evidence of a similar intrinsic difference between the contents of accurate and illusory perceptions.

There seem to be three distinct classes of illusions, which may be called respectively psychological, physiological, and physical illusions.

The Naive Realist can explain away psychological illusions more easily than illusions of the other two kinds. In the first place, the Naive Realist may claim that some of the illusions which are due to psychological factors are really partial hallucinations. In ordinary life, we call an experience a hallucination when the normal contribution of the senses is blocked out and a spontaneously generated figment of imagination substituted, or at least when the contribution of sensation is very slight and the imaginative supplementation extensive and unreasonable. But an experience is strictly a hallucination if <u>any</u> imaginary element is unwittingly introduced into the content before the mind. When the conditions of observation are not good, there is a tendency to see what is not there in order to make the apparent facts fit one's preconceived ideas of what is likely to be there. When the product of imagination is not extensive and is smoothly blended into a non-illusory context, it does not seem so plausible to suggest that the imagined content has a different ontological status from the other contents presented to

consciousness, but there is really no difference in principle between this case and the hallucinations of the madman.

Secondly, the Naive Realist may argue that in many other cases where perceptual errors are to be attributed to the influence of the mind, the errors are not due to the presentation of illusory contents, but to mistaken judgments which go beyond the observed data. We often jump to conclusions on the basis of insufficient evidence and introduce a risk of error, even when the given contents are above suspicion. We may imagine that we have been deceived by an illusion, because we suppose that we have actually observed what we have, in fact, inferred from a few shreds of evidence.

There are, however, a few exceptional cases which cannot be dealt with in either of the above ways. This is best brought out by taking a particular example. A frog has such good camouflage that in certain surroundings, if it is quite still, one may look straight at it and see only stones and leaves. Then suddenly, one catches the outline of the frog and the illusion is broken. Now there is surely a significant difference between this example and a case where one is deceived by a mistaken judgment. Descartes, looking from his window, sees hats and cloaks passing in the street below, and judges that these articles of clothing are covering human beings. But on reflection, he recognises that the hats and cloaks might perhaps cover "artificial machines," whose motions might

be determined by springs".* Now the immediate content before him is the same whatever judgment he accepts. But in the example of the frog, the content presented is quite different when one actually sees the frog from what it is when one sees only stones and leaves. Now, if the immediately presented content changes without a corresponding change in the external world, then it would seem that both contents cannot be genuine characters of objective reality. If one wishes to maintain that the frog-like appearance is a true character of reality, then one must admit that the appearance of stones and leaves is illusory.

But the Naive Realist can maintain his position, if in this special case, he appeals to a "selective" theory of perception. At different times, a subject may have presented different contents which are both objectively real, even although no change has occurred in the real world; for the subject never observes the whole of reality, and at different times may be contemplating different parts of the real world. This is clear enough when a subject changes the boundaries of his visual field. But one may overlook this possibility in a case like that of the camouflaged frog, where the subject does not change the field which he is observing. A visual perception is not, however, like a photograph: it is not a neutral and automatic recording of every element in the field of view. One emphasises certain elements and neglects others.

* Meditations, II, translated by Veitch, Everyman's Library, p.92.

One grasps patterns, and at different times one may grasp different patterns which are nevertheless all permanent features of the objective reality. To return to the example, at one time, certain lines are emphasised which present a pattern of stones and leaves. At another time, without any change in the physical reality, one sees the outline of a frog. Both patterns are objective features of the external world, although only one at a time is selected by the mind. Neither pattern is illusory, although one happens to be more helpful in suggesting the true nature of the external beings. We mistake the frog for stones and leaves because we are misled by the outline emphasised in the content of our experience: we correct our mistake when a different pattern is emphasised.

But even if the Naive Realist can explain away psychological illusions, he cannot deal so easily with physical and physiological illusions. To give an example of an illusion due to physiological conditions, let us take the case of an after-image. If a man focusses his eyes for some time on a bright light, when he turns away, he sees on the surface in front of his eyes a spot which was not there before. There cannot now be a spot where there was no spot previously, unless the surface has changed its character. But no physical reason for such a change can be found, nor is the change observed by anyone else. Moreover, the spot appears wherever he turns his eyes, and if he shuts his eyes it is all the more vivid. And these phenomena occur after the man has looked

at a light and at no other time. The obvious conclusion is that the content of his perception is illusory: that the physiological conditions of visual perception are responsible for the experience of a spot which is not objectively real. The physiological mechanism, overstimulated by the bright light to which it has just been exposed, has introduced a distortion into the content of experience.

A straight stick, partially immersed in water, appears to be bent. This is a good example of the distortion of the content of an experience by its physical conditions. The stick looks different from what it does when the physical medium between the stick and the eyes is simply air. But the shape of a stick is not altered when it is put in water: one can verify by touch that it still feels the same shape. Therefore, the apparent shape of the stick must be due to a distortion produced by the nature of the physical reality intervening between the mind and the external object.

The contents of perceptual experiences, then, are sometimes distorted by their physical and physiological conditions But this does not entail that the contents of experiences are always altered by their conditions. Indeed, it would seem that we distinguish certain perceptions as illusory only because we have other perceptions which we take to present without distortion the real nature of external beings. We dismiss the bent appearance of the stick in water as an illusion, because we have at other times an undistorted experience of

the real straightness of the stick. But it is not difficult to restate the argument in a way which avoids the implication that the contents of at least some perceptions are not altered by their conditions:- It is not possible that normal and illusory perceptions both present an undistorted picture of external reality. In normal circumstances, a certain stick appears straight, but when it is half submerged in water it appears bent. Now the same stick cannot be both bent and straight unless it has changed, and there is no evidence of such a change. Therefore, at least one of these incompatible characters cannot be a feature of the stick as it is in itself. This argument does not assume that the content of the so-called normal experience is an objective and undistorted feature of the external being. The apparent straightness and the apparent bentness of the stick may <u>both</u> be affected by the physical and physiological conditions of the experiences. Also, it is possible to justify calling the one perception normal and the other illusory without having to claim that the content of a normal perception is an unaltered feature of objective reality.

But although it is possible that the contents of both normal and illusory perceptions are altered by their physical and physiological conditions, it has certainly not been proved that this is in fact the case. It would, however, be important to prove this, only if one wished to refute the Representative Theory that the given contents are true copies

of the qualities of external beings. What we have established is practically fatal to Naive Realism, which maintains a physical identity between the presented contents and the external qualities. It is difficult to deny that all perceived contents have, as we remarked above, the same ontological status--that they have all the same position in the universe and the same kind of existence--so that if some illusory contents are shown to be merely subjective, no given contents can be supposed to be, as such, real qualities of external beings. The Naive Realist can escape only by making an implausible ad hoc distinction, which, unlike the distinction between contents of imagination and contents of perception, possible in the case of hallucinations, is supported by no independent evidence.

Moreover, the fact that the content of experience is sometimes distorted by its conditions confirms a conclusion which was reached above on the basis of the "time-lag" argument, that the physical and physiological conditions of experience are mediating conditions. If these indispensable conditions mediate the subject's experience of the external world, then the subject had no immediate perception of the character of the external reality, and Naive Realism is refuted. A condition which distorts the character of an external object must be a mediating condition of the experience of that object. The condition must, as it were, gain possession of a property of the external being, if it is to tamper with it. A

condition which was required only in order to permit the occurrence of a flash of intuition directly connecting the mind and its external object could not possibly affect the content immediately before the mind. Therefore, the existence of illusions proves that at least in some cases the physiological and physical conditions of experience are mediating conditions. This does not exclude the possibility that there are other cases in which they are not mediating conditions. But this is most unlikely. The physical and physiological conditions of experience can be expected to operate in much the same way in all cases.

We must now consider the evidence that the content produced by an external object varies when there is a variation in the perspective viewpoint of the experiencing subject. The same object looks big when it is near, and small when it is far away. And the apparent shape of the surface of an object varies with the angle from which it is viewed. The loudness of a sound varies with its remoteness, and a distant light gets brighter as one approaches it. This evidence is by far the most important proof of the subjective conditioning of the content of experience and it is effective against both Naive Realism and the Theory of Representative Perception.

Now, although the experience of an object in the external world from a particular point of view is not usually considered an illusion, the perspective of a subject may distort the content of his experience as radically as do the physio-

logical or physical conditions in the case of an illusion. To take but one example, the sun, ninety three million miles away, and a sixpence, a yard from one's nose, appear to have the same size, whereas the actual discrepancy in size is colossal. Surely, this experience involves at least as great a distortion of reality as does the experience of a stick, bent when immersed in water. The distortion caused by the perspective of the subject is not called an illusion, only because we have learned to make allowances, so that it does not mislead us. And since most people are not taken in by simple illusions, a more important reason for the distinction, perhaps, is that the distortion of perspective is a constant factor in experience and obeys a regular set of laws, whereas illusions are unusual and infrequent and occur only in special circumstances.

There are two reasons why it is even more difficult for the Naive Realist to reconcile with his theory the distortions in the given content which are due to the subject's perspective, than the distortions which are produced by physical and physiological illusions. In the first place, it is always possible to claim, in a case where an illusory content clashes with the content normally experienced, that the normal content is in a special position and that it may be a real quality of the external being even if the illusory content is not. There is, as we have seen, no evidence to corroborate this claim, but the claim can be made. At least, when one is called upon to exclude as unreal one of the two conflicting contents one

has no difficulty in deciding which to choose. But of the infinite number of incompatible perspective views of the same object, there is none which is in a specially privileged position. There are, indeed, some which seem to give a better picture of the external reality than others. The circular appearance, presented when the surface of a penny is viewed from one angle at a distance of a foot, would seem to be closer to the real nature of the penny than the smaller elliptical appearance presented when the penny is viewed from another angle at a distance of five feet. But is the content of experience ever identical with a real surface of an external object? The apparent size of an object always varies with its distance from the eye, so that the apparent size could coincide with the real size of the object only at one very precise distance.* Do we see the real surface of the penny when it is four inches away? Or three inches away? One, at most, out of the incompatible perspective views of the same surface of the same object can be a true representation of reality. We have no reason for preferring any one of a large number of different views. Therefore, it is not likely that <u>any</u> view reveals the true nature of the external

* Professor H.H. Price would challenge this assumption: he argues that there is a "Zone of perfect stereoscopy" within which "there is no increase of sensible size with decrease of depth". (<u>Perception</u>, pp. 220-221.) But one can easily show that even a slight variation in the distance of a penny from the eye may make the difference between the partial and total eclipse of another object whose apparent size, we may assume, remains constant.

object. And even if there were an experience which did not distort the character of reality, it would differ so slightly from certain other experiences that it would be incredible if its content had a radically different ontological status.

The second reason is that, whereas illusions are abnormal and occasional occurrences, the content experienced by a subject rarely escapes the influence of his particular perspective standpoint. All contents derived from the senses of sight, hearing and smell are partially determined by the perspective of the subject: only perceptions which depend on the senses of touch and taste have the possibility of revealing directly objective reality. But these perceptions escape the distortions of perspective, only because they are contact senses and there is no possibility of varying <u>physical</u> conditions. (In the case of sight and hearing, the variations in content due to the perspective of the subject may be classed as distortions due to the physical conditions of experience.) And in the case of touch and taste, there are variations of content due to a variation in <u>physiological</u> conditions, which closely parallel the variations due to perspective. One's sensations of touch change with the amount of pressure one exerts. Immediately after eating certain other foods, a dish may not taste the same as it usually does. And one's sense of temperature is affected by the condition of one's body. If one hand is plunged into hot and the other into cold water, and then both are put in a bowl of lukewarm water, to the one hand

the water feels hot, and to the other, the same water feels cold. The apparent temperature of the water varies with the condition of the hand. Have we, then, any reason to believe that any one of the many different states of the somatic organism is a normal state, which permits an unaffected awareness of objective qualities? It is very difficult to believe that touch and taste can achieve what sight and hearing cannot--an undistorted intuition of the properties of beings in the external world.

Thus, the Naive Realist cannot deal with the influence on the perceived content of the particular perspective of the subject, because all contents are liable to vary with a change in the subject's point of view, and because it is impossible to suggest that there is a difference in ontological status between the contents perceived from different perspectives. Moreover, the difference in the contents observed from different positions is a fact which cannot be easily reconciled even with the Theory of Representative Perception. This theory is not troubled by the existence of illusions. It is quite natural to maintain that normal contents truly represent the qualities of external beings whereas illusory contents do not. But it is most implausible to claim that one and only one out of the almost infinite number of incompatible contents which may be presented to observers in different positions is a replica of a real quality of the external object.

The importance of this argument should not be underrated, as it may be if one supposes that it is a sufficient refutation

of the Theory of Representative Perception to point out that one is never in a position to compare the presented content and the quality of the external being, so that there can be no empirical evidence of the similarity of the two elements. For this argument merely proves that the belief in Representative Perception is unfounded and is not based on any direct evidence: it does not prove that the theory is definitely false. So the two positive arguments against Representative Perception which we have examined in this chapter are by no means superfluous.*

IV. In the present chapter, we have been arguing against the view that the contents given in experience may be, as such, real qualities of external beings, and also against the view that these contents may be precise representations of external qualities. Our arguments are not intended to prove that there are no beings in an external world, or that one can have no knowledge of the existence or nature of such external beings. Indeed, throughout the whole course of the discussion, we have been assuming that there are real beings outside and independent of conscious experience. And we have even assumed some knowledge of the nature of these external beings. For example, we have assumed that there are incompatible characters which an object cannot reconcile--the same surface of the same penny

* The other argument (above, p.23) is that the mediating conditions of perception probably always modify the qualities they transmit.

cannot be both round and elliptical, unless it has changed. And we accepted the validity of the scientific evidence which proves that the real surface of the penny does not change its shape when one changes one's point of view.

But even although our arguments were not designed to show that the conscious subject has no awareness of external beings and that there are no grounds for believing in the existence of such things, perhaps we have unwittingly committed ourselves to this conclusion. Our purpose has been to correct the mistakes of Naive Realism without giving up the fundamental conviction of the Naive Realist that there are external beings. But perhaps the considerations which we have adduced in order to prove that the content of immediate experience is not a objectively real will compel us, when their implications are fully developed, to admit that we are cut off from any knowledge of an objective reality. We must now attempt to show that this is not the case--that none of the arguments we have employed damages one's natural belief in the existence of an external world.

The most troublesome argument is the argument that one's experience of an external object is mediated by physical and physiological conditions. If this is so, then there can be no <u>direct</u> experience of common sense external objects such as trees and tables. Now, is there evidence strong enough to permit an inference to what is not directly experienced? If one's direct experience is strictly confined to the contents

of one's mind, then the answer is surely in the negative. There is nothing about the content of experience, as such, which would lead one to postulate a reality beyond, from which it is derived. But the physiological evidence does not rule out completely the direct experience of other beings by the mind. It reveals that when one seems to see a chair, the chair is not directly experienced. But it does not prove that no direct awareness of external beings is possible; for there is no reason why the subject should not directly experience for example, the beings in the brain which are the last messenger in the route of transmission leading from the chair to consciousness. And even with so restricted an experience of the external world as this, the case is quite different from what it would be if we had no direct experience of external reality whatsoever. If we can only escape from the circle of consciousness, we have a secure basis, which may justify the construction of the whole external world. Within the circle of consciousness, one can discover no idea of causality which will justify the assumption of a source outside consciousness which is responsible for the production of its content. But if one has a direct experience of even one external being, this experience may yield a notion of causality which will allow one to assume an indefinite series of more remote causes.

In our final chapter, when we discuss experience in more detail, we shall try to show that it is in fact legitimate to infer the existence of common sense material objects in

the way we have suggested. In the same chapter, we shall also argue that there is an essential identity between causal connection and the relation of experiencing. If this is so, if a being necessarily experiences the things by which it is causally affected, we may argue that the physiological evidence, far from proving that no experience of an external reality is possible, actually implies that some external beings are directly experienced by the conscious subject, viz. the beings which are immediately responsible for the contents produced in the mind.

There is another argument to the effect that the physiological evidence cannot be used to question the experience of an external world, since this evidence presupposes the validity of the observations on which the science of physiology depends. But this argument has force only as an argumentum ad hominem against all persons who are unwilling to doubt the objective validity of physiology. It has no weight against a sophisticated Solipsist who is using a reductio ad absurdum argument, assuming an experience of external beings and the validity of physiology, only in order to exhibit the contradictory consequences which he believes to flow from this assumption. It is no criticism of an argument to show that it assumes what it sets out to disprove.

Thus, a knowledge of the existence of an external world is not ruled out by the above arguments. We must now consider whether these arguments make impossible a knowledge of the nature of the external world. It is difficult,

perhaps impossible, to maintain the existence of "something I know not what".

The positions disproved in this chapter are Naive Realism and an extreme form of the Theory of Representative Perception. We have shown that it is very unlikely that the contents presented in immediate experience are ever even replicas of real qualities of external beings. But we have not shown that no knowledge is possible of the qualities of the common sense material objects in which we are principally interested: we have not even shown that there is no degree of similarity between the given contents and the qualities of these external beings.

Our common sense beliefs about the world are not open to the criticisms levelled against the immediate content of experience. For we have learned to detect illusions and to make allowances for the distortions due to our particular perspective standpoint. Certainly, we are still liable to make mistakes, but this does not mean that our ordinary beliefs are not, in the main, accurate and reliable.

A good way to illustrate this point is to consider the spatial characteristics of the things in the world. Clearly, the immediate contents of experience do not truly represent the shapes, sizes and positions of external beings. Sometimes, there are distortions due to abnormal conditions, and there are always distortions due to the particular perspective of the subject. But our ordinary empirical beliefs overcome the

distortions of perceptual illusions. We do not have to accept that a straight stick becomes bent when it is dipped into water: we do not have to suppose that behind a mirror there are objects which duplicate the objects in front of it: and we can explain the generation of the misleading appearances. Moreover, our empirical knowledge escapes the perspectival distortions which are inevitable in immediate experience. By comparing perceptions from different positions and by relying on techniques of measurement, we can abstract from all particular points of view, and we can put forward an objective description of the spatial characteristics of external beings in terms of a universally valid geometrical system. Moreover, this geometrical system positions within itself all private viewpoints, and it reconciles and harmonises what is observed from different points of view by explaining the systematic principles in virtue of which what one observes from different positions differs in the way it does.

But our empirical knowledge necessarily depends on the evidence of what is revealed in sense perception: it is the product of the comparison and co-ordination of our immediate perceptions. Even objective measurement techniques ultimately depend on a perception of the equivalence of the thing measured and the measuring rod. How, then, can our empirical knowledge claim a greater validity than the immediate perceptions on which it is based?

We have shown that the contents given in experience

are not replicas of the characters of common sense material objects and that other factors make a contribution to the nature of the sense presentations. But we have not shown that external material objects make no contribution whatsoever to the contents usually attributed to them. There is no reason why one should not accept the natural belief that external material objects do have some influence on what appears to consciousness. Now, if a content of immediate experience is a synthesis of factors contributed by a certain material object and the various conditions of the experience, it may be possible to isolate the contribution of the material object and to remove the distortions introduced by other factors. If this can be done, an abstract empirical knowledge may provide a more accurate picture of reality than the sense presentations on which it depends. We must, however, postpone a detailed examination of the nature and extent of our empirical knowledge until the final chapter of this work. At present, we are simply concerned to maintain that the arguments which are effective against Naive Realism and the Theory of Representative Perception do not necessarily invalidate our ordinary empirical knowledge.

CHAPTER THREE.

CARTESIANISM, SOLIPSISM, AND PHENOMENALISM.

I. In the last chapter, we took for granted the existence of the independent, external beings accepted by common sense. We discovered that the features immediately presented to consciousness--patches of colour and the like--could not be real properties of the external beings to which they are usually attributed. Therefore, we distinguished two very different types of awareness which we took to be present in experience--an awareness of what we called the content of experience and an awareness of real objective beings beyond and independent of the experiencing subject. We argued that the Naive Realist is embarrassed by the evidence that the nature and situation of the percipient subject influences what is given in experience, because he fails to distinguish these two kinds of awareness. When they are distinguished, one can reconcile the subjective conditioning of the content of experience with the independence of its external object.

In Chapter Two, we did not elaborate the epistemological theory which we suggested. An adequate account of experience and knowledge must be based on a general metaphysical theory which explains the nature and interrelationships of the beings in the world, and we cannot hope to provide a detailed and systematic epistemology until the final chapter of this work.

It was, however, necessary to answer certain objections to our fundamental assumption of an awareness of external beings beyond the presented sense-contents. We showed that the arguments which establish the subjectivity of sense-contents do not prove that no awareness of the existence or nature of an external reality is possible.

This means that it is not necessary to admit that our experience is confined to the contents immediately present to consciousness, or to subscribe to some version of Phenomenalism. But we have not shown that Phenomenalism is an impossible view. We have shown that if we assume a direct awareness of external beings, we encounter no insuperable difficulties, but we have not shown that it is necessary to make such an assumption. Philosophers have been prepared to accept Phenomenalism, mainly because they have believed that there is no evidence that men experience anything beyond the "sense-data" immediately before the mind. We shall argue, towards the end of the present chapter,* that a careful and unprejudiced examination of experience strongly suggests that men do experience external beings distinct from the sense-data recognised by Phenomenalists. But the subject matter of epistemology--experience--is very obscure, and it is possible that we are mistaken. We cannot claim that we have an <u>infallible</u> intuition that men are directly aware of things other than sense-data. Therefore, Phenomenalism although implausible, is a possible view, and it must be

* below, Section V.

examined in detail.

One apparent advantage of the Phenomenalist doctrine that a subject has only one kind of immediate awareness is that it is simpler. One is inclined to argue that the simpler of two views, if only it be adequate to explain the facts, ought to be preferred, although it is difficult to justify on reflection the principle which lays down that the more complex view, even if it is not incoherent, is less acceptable. But nevertheless, it does seem a good methodological rule that one should not make unnecessary assumptions. If a theory could be constructed which assumed only one kind of direct awareness and which was adequate to the facts of experience, it would be in a very strong position. But adequacy is a much more important requirement than simplicity. Phenomenalism will not be saved by its simplicity if it is inadequate. And if it is to be adequate, Phenomenalism must show how it is possible to infer from the data immediately presented in experience to the material objects which the plain man believes to exist, or at least to something very like them. Our natural belief in the existence of external physical beings would have to give way, if a philosopher could show that it was impossible either to have a direct experience of such beings, or else to infer their existence. But, as we have seen, a direct experience of other beings is not impossible. Therefore, an adequate epistemological theory must come to terms with the plain man's belief. It can no longer demand

unconditional surrender. Our ordinary belief in the existence of an external world is so strong that it should not be abandoned unless this is absolutely necessary. And since it is possible to construct a theory which respects our ordinary belief in the external world, Phenomenalism must also respect this belief if it is to be considered as a possible alternative.

But is it true that the Phenomenalist hypothesis is, in the important sense of making fewer basic assumptions, the simpler view? It would seem that the Phenomenalists make but one assumption, and that an assumption which can hardly be questioned, namely that a subject experiences a certain content which is immediately presented to his consciousness. The alternative view grants the Phenomenalist assumption and makes in addition an assumption which may be disputed, that a subject has a direct awareness of other beings distinct from the presented sense-contents. But strictly, the Phenomenalist is also making two assumptions. For he is assuming that the subject has <u>no</u> direct experience of beings distinct from sense-data. And <u>this</u> is an assumption which is surely open to question.

II. Before we enter on a detailed discussion of Phenomenalism, we must consider the Cartesian view. Descartes agreed with the Phenomenalists that an experiencing subject has no direct awareness of anything except the ideas or sense-data which are immediately present to consciousness. But

unlike the Phenomenalists who attempt to deal with the plain man's external world by reducing it to sense-data, by explaining it as a logical construction out of sense-data, Descartes believed that it was possible to infer to a real substance distinct from sense-data and to demonstrate the existence of a material world. If Descartes is right, if it is possible to argue from the content presented in experience to an external reality of a radically different nature, then the Phenomenalist reduction of external things to sense-data would be illegitimate and a detailed examination of Phenomenalism would be merely an academic exercise. But as a matter of fact, Phenomenalism and other similar views have been put forward by philosophers who have become convinced that the Cartesian "Proof of the Existence of Material Things" is invalid. However, this is in itself a good reason for discussing Descartes before tackling Phenomenalism. Descartes may be justly regarded as the Founder of Modern Epistemology, and most subsequent epistemological theories exhibit the influence of Cartesian thought. The ancestry of Phenomenalism may be traced back to Descartes by way of Hume, Berkeley, Locke and Malebranche.

Descartes' most important contribution to epistemology is that he emphasised the clean-cut distinction between the contents or ideas present in consciousness and the physical objects which exist in an external world. Descartes' distinction between ideas and external objects was closely connected with his rigid mind-matter dualism, but it is

possible to accept this distinction without admitting that conscious subjects are so completely different from the beings in the physical world as Descartes would have us believe. Now, this distinction between ideas and external objects introduces into philosophy problems which it is not easy to solve; and it might be argued that in making this distinction, modern epistemology has gone off on a wrong track. But one should not abandon a distinction which, as we argued in the previous chapter, makes possible a common sense explanation of the facts of experience by which Naive Realism is refuted. For the mistaken assumption which is responsible for the difficulties of modern epistemology is the assumption that the experiencing subject has no direct awareness of external beings distinct from the sense-presentations.

Descartes introduced into philosophy a new method--the celebrated Method of Doubt. Descartes believed that in accordance with this method he could construct a system in which was demonstrated, among other things, the existence of material objects. We shall show first, that Descartes' system does not satisfy the rigorous prescriptions of his method. This means that either Descartes must relax his rule that no principle should be admitted which is not absolutely indubitable, or else he must sacrifice the system which he has constructed. We shall then try to show that one should reject both the Cartesian method and the Cartesian system.

The philosophical method which Descartes prescribes

is " to doubt of all those things in which we may discover even the smallest suspicion of uncertainty"* and "to consider as false all that is doubtful."** That is, the philosopher should admit as true only what is absolutely certain and indubitable. Descartes believes that if one succeeds in discovering a principle which is entirely certain, one may hope to deduce from it a complete system of certain knowledge.

In accordance with this method, Descartes proceeds to doubt the existence of sensible things. He gives two reasons "why we may doubt of sensible things."*+ He argues first that "we know by experience that the senses sometimes err, and it would be imprudent to trust too much to what has even once deceived us."*+ His second argument is that in dreams we seem to perceive many objects which have no real existence and there are no marks by which we can "with certainty distinguish sleep from the waking state."*+ It is important to be clear just how much these arguments actually proves, for similar arguments have had considerable influence in undermining the common sense belief in the existence of an external world. Descartes' arguments proves, at most, that any particular sense-experience may be mistaken and is therefore doubtful. We are sometimes deceived, even when we feel quite sure of the existence of the object which we seem to perceive. Therefore, no matter how

* The Principles of Philosophy, Part One, I. All quotations from Descartes follow Veitch's translation.
** ibid., II.
*+ ibid., IV.

sure we feel on any particular occasion that we are seeing what is really there, we must admit the possibility that we are mistaken. Also, we sometimes discover that we have been dreaming, although at the time we felt sure that we were awake. Therefore, we can never be quite certain that we are not really dreaming, no matter how strong our belief that we are awake.

But even if we may doubt the veracity of any particular sense experience, it does not follow that we may doubt the existence of the external physical world. It may be that we can doubt any sense experience, taken by itself, without being able to doubt all sense experiences, taken together. One can admit that either of two sense experiences may be mistaken, while maintaining that both cannot be mistaken. We may never be sure that we are not dreaming and yet know with certainty that we do not dream all the time. To argue from the premiss that all experiences, taken one by one, may be doubted to the conclusion that all experiences, taken together, may be doubted is to commit the logical fallacy of composition. Therefore, Descartes has not disproved the contention that some sense experiences are valid, even if we do not know which; and if it is certain that some sense experiences are valid, it is certain that the external world exists.

But in actual fact, Descartes does not require the above arguments in order to prove that the existence of material things may be doubted. Although the occurrence of dreams and perceptual mistakes is no good reason to doubt the reality

of the material world, it is logically possible that our common sense belief is mistaken, in that one does not contradict oneself if one denies or doubts the existence of the external world which we ordinarily accept.* In order to justify his otherwise unwarranted suspicions, Descartes may make use of the extremely powerful "Deceiver" whom he requires in any case to put in question the supposed truths of mathematics.

But Descartes maintains that there is one thing which it is absolutely impossible to doubt, and that is the existence of the doubting subject. For if I doubt, then I think; and if I think, then I necessarily exist. The existence of a doubting subject is a necessary presupposition of any act of doubting, and it cannot itself be doubted without self-contradiction. One can hardly question this step in Descartes' argument. That I exist while I am doubting is a principle which satisfies the most stringent requirements of the Cartesian method. But how much does this argument establish? It surely does not justify the conclusion that the "I" who doubts is anything beyond its present act of doubting.

But although Descartes spotlights the case where the subject attempts to doubt his own existence and finds that he cannot without self-contradiction, his essential thesis is not, dubito, ergo sum, but cogito, ergo sum. Just as the existence of an act of doubting cannot be doubted by a subject who is conscious that he doubts, so the existence of any act

* See note at the end of this chapter.

of thinking cannot be doubted by the subject who is conscious that he thinks. I doubt, therefore I am, is simply a special case of the more general principle, I think, therefore I am. And "thought" (cogitatio), in Descartes' use of the term, has a very wide meaning and refers to any conscious experience whatsoever. What Descartes is contending is that it is impossible for a subject to doubt that he is really having the experience which he seems to be having. Descartes does not himself see any need to defend this contention, but if he were pressed, he might answer, as does Professor H.H. Price in similar circumstances*, that there is no room for a distinction between what is given in consciousness and what seems to be given in consciousness.

In this way, Descartes establishes the existence of more than a bare act of doubt, but so far he has not escaped from the "Solipsism of the present moment". He cannot conclude that there is a thinking substance which endures through time and which has had in the past a variety of experiences. For our memory of the past is surely no more above suspicion than our perception of contemporary material objects.

But whatever the extent of the self or thinking substance which Descartes has established, he still has to prove the existence of beings other than the self. In order to do this, he believes that he must prove that there is a God who is no Deceiver. Descartes gives in all, three proofs of the

* cf. Perception, p.10.

existence of God, but none of these proofs is successful. In the case of the two proofs given in Meditation III, Descartes appears to be arguing in a circle. In the first proof, Descartes argues that there must be a God who is responsible for the existence of the Idea of God which he finds in his mind. In the second proof, he argues that the cause of his own existence must be God. It is not necessary to examine these proofs in detail, since both proofs clearly assume, among other things, the truth of the principle that everything has a cause. Now, if we are strictly applying the Method of Doubt, we cannot accept the principle that everything has a cause, because of "our ignorance on the point as to whether our nature... [is] such that we might be deceived, even in those things that appear to us the most evident."* Descartes wished to prove the existence of God in order to guarantee the truth of such principles. And it is therefore illegitimate to assume the truth of such principles in order to prove the existence of God.

But the argument given in Meditation V seems to escape this charge of circularity. For Descartes attempts to derive the real existence of God from the existence of the Idea of God in the human mind, without assuming the truth of the Principle of Causality or anything else. If this argument does prove that God exists, then the other two proofs of the existence of God might be sound arguments, although they would not be

* Principles of Philosophy, Part One, XXX.

independent proofs. And if Descartes put forward this argument first, as he does in The Principles of Philosophy, his procedure would not be circular.

The argument in question is a version of the celebrated ontological argument, and is briefly as follows. The Idea of God is the Idea of a Supremely Perfect Being. Existence is a perfection and is therefore part of the essential nature of a Supremely Perfect Being. Therefore, we cannot conceive God except as existing, and since we can conceive God, God necessarily exists. It is clear, however, that this argument does make assumptions. It assumes that existence is the sort of thing which may be part of an essence or concept, at least in the case of God. But this is surely a very dubious assumption. How can an idea in the mind ever involve the real existence of the object to which it refers? In the Critique of Pure Reason,* Kant shows in detail and very convincingly that existence can never be included in a concept, that to ascribe existence to an object we must always go beyond its concept. Thus, it would seem that Descartes' ontological proof of God involves an assumption which is not merely open to question, but which is almost certainly false.

Descartes, then, has failed to demonstrate the existence of God, and this involves the collapse of his whole system. For Descartes assumes the existence of God in his proof of the existence of material things.

* A 592-A602: B 620-630.

But it is perhaps unfair to maintain that Descartes' argument is circular. One of the most difficult problems in the interpretation of Descartes' philosophy is to discover what are the limits to the power of the Deceiver--in other words, to discover what exactly we may doubt and what we may not. It is not clear how Descartes would answer this question, for he writes in one place, "We might be deceived even in those things that appear to us the most evident"*, whereas in another place he writes, "What the natural light shows to be true can be in no degree doubtful."** Now, if it is the second passage which expresses Descartes' considered opinion, and if, as Descartes maintains, the principles used in proving the existence of God are shown to be true by the natural light, then the Cartesian argument is not circular.

We must conclude that Descartes does not really mean that we may be deceived "even in those things that appear to us the most evident", even in the case of what the natural light reveals to be true. For if this was Descartes' real position, he would have to abandon all hope of certainty. Even the very existence of the doubting subject would not be certain. For that "he who thinks must exist while he thinks"*+ is a principle whose truth is discerned by the natural light, and if the natural light is not above suspicion, then this principle will not be indubitable. To doubt in general of what is

* Principles of Philosophy, Part One, XXX.
** Meditations III, Everyman's Library, pp. 98-99.
*+ Principles of Philosophy, Part One, XLIX.

revealed by the lumen naturale is to doubt the essential truthfulness of human reason. And if one doubts the trustworthiness of human reason, there is no way in which this doubt can ever be removed. Reason can never be reinstated. Any arguments which purported to prove the truthfulness of reason would have to assume the truthfulness of reason.*

But what this amounts to is that what the natural light shows to be certainly true is certainly true. The existence of the thinking subject is safeguarded against all possible doubt. For the natural light shows that the thinking subject certainly exists, since its existence cannot be denied without self-contradiction. But the fact that the natural light of reason must be above criticism does not save Descartes' proofs of the existence of God; for the important point at issue is what indubitable principles are revealed by the natural light. Does it show, for instance, that the principle, "Everything has a cause", is certainly true? Unlike some of the other assumptions which Descartes makes in the course of his proof, this is not an unplausible principle. But it is not indubitable: it can be doubted without self-contradiction, and many philosophers have maintained that it is false.

Thus, Descartes has not provided a certain demonstration of the existence of God. Granted that one cannot question the truthfulness of the natural light, Descartes has not

* I do not wish to tackle here the difficult problem of whether it is in fact possible to doubt in general the trustworthiness of human reason. I suspect that it is not.

established that the principles required in his proof are shown by the natural light to be certainly true.

Therefore, there is a fundamental inconsistency in Descartes' philosophy in that his system does not measure up to the rigorous standards prescribed by his method. This means that either Descartes' method is wrong, or his system is wrong, or both. Let us first examine the Cartesian method.

If the Cartesian method is defective, its defect cannot be that it will lead one into error. For if one accepts as true only what cannot be doubted, one surely cannot go wrong. But the method may be inadequate and impracticable. If Descartes had succeeded in establishing his system, he would have done much to validate the method which he employed. Nothing could come closer to fulfilling the greatest hopes of a speculative philosopher than a metaphysical system in which every item was rigidly deduced from indubitable principles. Also, the universe which Descartes describes is not too unlike the universe in which we think we live: it contains thinking beings, a God, and a physical world. But as we have seen, the Cartesian system does not satisfy the Method of Doubt: if one refuses to accept anything which it is possible to doubt, one cannot get beyond the existence of the present self and the given ideas to an external world. Therefore, if a philosopher restricts himself to what can be known with certainty, he will have very little to say. But if there is more to be said, the Method of Doubt will not be an adequate

philosophical method.

The Cartesian method is essentially the mathematical method, in abstraction from the special object of mathematics—quantity. Descartes was very impressed by the success of mathematics, and he hoped that if the mathematical method was introduced into philosophy, philosophy would have a similar success. But there is an important difference between mathematics and philosophy which makes it unlikely that the method of the one would produce results in the other. In mathematics, the axioms of the system and the exact definitions of its elements are known in advance. Therefore, a deductive method is appropriate. From these axioms and definitions one may deduce the whole of mathematics. But in philosophy, axioms and exact definitions are not known in advance, and we have no guarantee that they will be quickly discovered. Indeed, it seems much more likely that these axioms and definitions will be discovered, if at all, only at the end of the philosophical investigation.

But the most serious criticism of the Method of Doubt is that Descartes' methodological rule does not itself satisfy the conditions which it lays down. That a philosopher should accept only indubitable propositions is not itself an indubitable proposition, and should therefore be rejected by a consistent Cartesian. And if, in order to escape the contradiction, one asserts that the methodological rule makes an exception in its own favour, one will have no justification for maintain-

ing that there can be no further exceptions.

Now, if the Cartesian method is given up, we may reconsider the Cartesian system. For even although Descartes does not practice what he preaches, he may nevertheless have constructed a system which provides a plausible explanation of the universe. He has not succeeded in demonstrating that his system is certainly true, but this is no longer a fatal objection against it. We must notice, however, that there is now no need for the complicated system which Descartes develops in order to prove the existence of material things. For if a philosopher is not debarred from accepting propositions which it is logically possible to doubt, there is no necessity to reject the contention that we have a direct awareness of the external world. This removes Descartes' main justification for his initial rejection of such an awareness. As we have seen*, the detailed arguments which he employs prove, at most, that any particular sense experience is open to question and not that there are good grounds for suspecting the unreality of the entire external world.

We now wish to show that Descartes' proof of the material world, far from satisfying the stringent requirements of a demonstration, is not even a plausible argument. Descartes' proof is briefly this. I discover in my mind certain ideas of extension, motion, and so on of which I cannot myself be the cause. I have "a very strong inclination

* above, pp. 52-53.

to believe that those ideas arise from corporeal objects"* and God could not be "vindicated from the charge of deceit"*, if these ideas were not produced by material things. But God is no Deceiver. Therefore, material things exist, although for Descartes, the material world is not the rich and variegated world of common sense, but bare extended matter in motion.

Although God figures prominently in the Cartesian proof, He is really irrelevant to the argument. God is brought in to guarantee what Descartes believes is taught by nature. But the real question is, "What does nature teach?" Descartes himself makes a distinction between what is taught by nature and what <u>seems</u> to be taught by nature. We naturally tend to believe that the things in the world really have the colours which we see. Descartes denies that this is so. Is God, then, a Deceiver? Descartes rejects the imputation. We merely <u>seem</u> to be taught by nature that external things are really coloured, and God has given us a power of reason by which we can criticise this unwarranted belief. What must be determined is "What does reason declare to be the case?" God will automatically endorse whatever reason decrees; and He will show no special partiality towards Descartes. Descartes must be prepared to defend his position on other grounds than that God is no Deceiver. Thus, in order to assess Descartes' proof of the existence of the material world, it is not necessary to assess the plausibility of his arguments

* <u>Meditations</u> VI, Everyman's Library, p.134.

for the existence of God.

It was not long before other philosophers took advantage of this weakness in the Cartesian proof. Malebranche objected that notwithstanding our strong inclination to believe that certain ideas are produced in the mind by external bodies, Descartes was mistaken. For the light of reason made evident that no interaction between material and mental substances was possible. Descartes deceived himself when he relied on his "strong inclination to believe". He was not deceived by God, for God had endowed him with a reason which should have shown him his mistake. Malebranche did not himself deny the existence of matter, and he held that although there is no interaction between mind and matter, God directly produces certain modifications in mental substances on the occasion of modifications in material substances. He wished to contest only Descartes' view that material things are the direct causes of the appearance of ideas in the mind. But Berkeley could use a similar line of argument against the Cartesian view that there is such a thing as matter. He could argue that reason shows that there is no such thing as the material substance accepted by Descartes, and that if Descartes was deceived into thinking that there was, it was certainly not by God. For Descartes would have avoided the deception, if he had accurately discerned what reason reveals.

Therefore, Descartes' proof of the existence of material things will derive no support from a proof that there is a God

who is no Deceiver. It must stand or fall on its own merits. And when its merits are examined, one discovers that it is open to several serious objections.

The most radical criticism would be made by Phenomenalists, who would contend that it is illegitimate to argue from the ideas presented in experience to an external reality which is responsible for their production. For what is the justificatior of the principle of causality which Descartes employs? In experience, we do indeed discover something which might be called causal connection. But this is nothing more than a phenomenal regularity of sequence which makes it possible to predict, often with considerable accuracy, what ideas will be presented in the future. The existence of this regularity of sequence certainly does not permit an inference to a reality beyond the presentations. Now, this objection has a good deal of force against the Cartesian position. For Descartes refuses to admit the direct awareness of external beings in which, as we hope to show in our final chapter, we experience a causal connection which is more than a mere regularity of sequence. The only answer which Descartes can give is to say that the truth of the principle of causality is known a priori, that it is an "innate idea"; and this answer will hardly convince those with Empiricist leanings.

But even if it is granted that our ideas of extension must be produced by some external substance, what reason is there to believe that this external substance is a matter which is

characterised only by extension and motion? Should we not prefer Berkeley's economical hypothesis that these ideas are directly produced by God? And even if the ideas are produced by other finite beings, what guarantee have we for assuming that these beings are characterised by extension and motion? And what justification is there for excluding from material things the other properties which we should naturally ascribe to them? As Berkeley pointed out, the arguments which might be used to impugn the reality of secondary qualities have an equal force against the supposed primary qualities.

And in any case, is the material world as described by Descartes a workable hypothesis? For if the essence of matter is simply extension, what can there be which distinguishes one part of matter from the other parts? And if all parts of matter are the same, there could be no real shapes and figures, for boundaries are significant only if there is a difference between what lies on the two sides of the boundary. Motion, too, would be meaningless, for no interchange of parts could make the slightest difference to the nature of reality. And Descartes comuld not make use of the distinction between extended matter and empty space which is accepted by the Atomists, for he believed that the material world is a <u>plenum</u>.

The conclusions which are to be drawn from this discussion of Descartes are first, that the assumption of a direct awareness of external beings is not necessarily illegitimate, since one cannot consistently maintain that a philosopher should make

no assumption which it is possible to doubt; and second, that one can never infer from the ideas immediately present in consciousness to a real external world, even if one is not required to produce a strict demonstration and a plausible argument is deemed sufficient.

III But although we have shown that a philosopher is not entitled to reject the assumption, that the subject has a direct awareness of external beings distinct from sense-data, on the ground that it is logically possible to doubt this, yet we have not established the existence of this immediate awareness of external things. And nothing has turned up in the course of our examination of the Cartesian theory which in any way weakens the case for Phenomenalism. For the Phenomenalist relies on the argument that there is no evidence that the subject has an immediate experience of external objects, and not on the argument that the existence of such an experience may logically be doubted. Indeed, the case for Phenomenalism has been greatly strengthened, since the argument that one cannot infer from sense-data to an external reality with a very different nature has removed an important competitor.

But before we discuss Phenomenalism proper, there is another theory which we must not overlook, namely Solipsism. Solipsism is very like Phenomenalism, in that both theories agree that there is no direct awareness of a physical reality distinct from the sense-contents immediately presented to consciousness and that it is impossible to make an inference

to such a reality from the immediate sense-data: indeed, Solipsism might almost be considered to be one species of Phenomenalism. The essential difference is that Solipsism assumes that the sense-data of which a subject is immediately aware are elements in his constitution, that the contents presented in experience depend on the experiencing subject, whereas Phenomenalism makes no such assumption. The Solipsist maintains that he alone exists, since everything he experiences is part of his nature and he has no warrant for assuming the existence of anything beyond what he experiences, whereas a Phenomenalist would not hold that the experiencing subject is the only real being in the universe.

We now wish to draw attention to the weaknesses of Solipsism which make it a much less satisfactory theory than Phenomenalism. There are two main reasons why Solipsism is inferior to Phenomenalism. First, the Solipsist is compelled to contradict flatly the plain man's belief in an external world, whereas the Phenomenalist claims that he can offer a reinterpretation of this belief. Secondly, the assumption made by the Solipsist and not shared by the Phenomenalist, that what is experienced is part of the experiencing subject, is an assumption for which there seems to be very little justification.

Although the Solipsist rejects the plain man's belief in an external world, he does not, and cannot, reject the apparent facts of experience. And in his own way, he can explain everything which is given to consciousness.

He must, indeed, reinterpret the facts of experience in a manner alien to common sense. But this reinterpretation can be carried out by a thoroughgoing Solipsist, if the Solipsist principle of interpretation be granted. That is, there is no detail in experience which can absolutely hold out against being construed in terms of the Solipsist system. One might imagine that one could confute a Solipsist by arguing thus: "You are trying to convince me of the truth of your doctrine. You could be serious in such an attempt, only if you believed that I was a real independent being, and no mere element in your constitution. And this belief is incompatible with your real belief in the truth of the doctrine of which you are trying to convince me." But the Solipsist could legitimately retort: "In trying to convince you that Solipsism is true, I am merely trying to alter one of my ideas in a way which I believe to be desirable. And it does not follow from the fact that my ideas are not what I should like them to be, that they are not sustained in existence by my being." Solipsism cannot be refuted by a straightforward appeal to the facts of experience. But this does not prove that Solipsism fits the facts and is therefore true, for it may be that Solipsism systematically distorts all empirical facts to fit in with its own assumptions.

A Solipsist, then, can give his own account of the apparent facts; but his interpretation of the phenomena involves the rejection of the external world which the plain

man imagines to be incontestably real. Now, it is, of course, possible that the plain man is wrong, and if there was no alternative to Solipsism, the plain man's belief would have to give way. But since there is an alternative theory which accepts our common sense beliefs more or less at their face value, an adequate epistemological theory has to do more than accept the contents immediately presented in experience, it must also accept the plain man's belief in the existence of an external world.* It would, of course, be legitimate to interpret this belief in an unusual way, if such a reinterpretation could be successfully carried through. But the Solipsist must simply reject as a complete illusion the common sense belief in an external physical world. For he cannot even agree with common sense that there is an external reality, since he denies that the contents immediately presented in experience are external to the subject to whom they are presented. Even if the Solipsist succeeds in explaining, on his own premisses, how the "illusion" of an external world is generated, this will not save his position, since it cannot be admitted that the external world <u>is</u> an illusion, so long as an alternative is possible. The Phenomenalist, who admits that sense-data are external, is better placed: he can accept the plain man's belief in an external reality, although he has still to account for the plain man's belief that this external reality extends beyond the contents presented to consciousness.

* cf. above, pp.48-49.

Therefore, the fact that Solipsists assume that sense-data are internal to the experiencing subject makes it impossible for them to come to terms with the common sense belief in an external world. But an even more serious weakness of Solipsism is that this assumption, that sense-data are internal to the mind, is itself very dubious. Phenomenalists are satisfied with an assumption which can hardly be disputed--that certain sense-data are presented in experience--and they are in a much stronger position because they do not commit themselves to the view that sense-data are parts of the constitution of an experiencing subject. To say that sense-data are elements included in the nature of the conscious subject, that they are "in" the mind, is indeed very plausible in the context of a system which admits the reality of external beings distinct from sense-data. For, as we noted in the previous chapter, what is immediately presented in experience would seem to be affected by the nature of the experiencing subject, and cannot be part of an independent external world. Therefore, these sense-data must be included in the mind, since one can hardly postulate a third realm, distinct from both the mind and the physical world, where they may be conveniently housed. But can one retain the position that the contents given to consciousness are subjective, if one gives up the view that there are external beings beyond these sense-contents? If one accepts as real only the situation in which one is directly confronted by certain sense-contents, it is difficult to find a justification

for the belief that these sense-contents are parts of one's own being. Sense-contents are simply given, and there is no evidence that they are in any way affected by the subject. And there is no undue incoherence in a system which maintains that they are objectively real, and exist apart from the mind.

One might argue, then, that the essential mistake of Solipsism is that it is insufficiently critical in its rejection of the straightforward Pluralism which accepts both minds and external bodies. The Solipsist rejects the real external beings accepted by the Pluralist, but retains unaltered the Pluralist's conception of the experiencing subject. The Phenomenalist is more consistent when he rejects both minds and external beings, as understood by the Pluralist.

Moreover, the Phenomenalist may argue that if the external beings accepted by the Pluralist are denied, sense-data must take over to some extent the role played by the external beings in the Pluralist system. Experience is basically an experience of an object distinct from the experiencing itself. The Pluralist may make sense-data subjective, because he assumes an external object of experience beyond sense-data. But if there is nothing beyond sense-data, then the sense-data must themselves have a certain objectivity. The Solipsist can escape the force of this argument, only by dogmatically declaring that it is impossible for a being to experience anything outside himself. Such a declaration is plausible, only because it is extremely difficult to explain

how one being can experience another. But our indapacity to explain in other terms an ultimate fact like our experience of external beings is no good argument against its reality. And the Solipsist's dogmatism begs the question against the most naturxal interpretation of experience.

IV. The above considerations indicate that Phenomenalism is a much more formidable position than Solipsism, and it is to Phenomenalism that we must now turn our attention. The Phenomenalist does not make the unwarranted assumption that sense-data are parts of the experiencing subject, and so avoids one of the obstacles in the way of providing an adequate reinterpretation of the common sense belief in an external world. But we shall argue that although he makes an ingenious and valiant attempt to reconcile with his own assumptions the plain man's belief in the physical world, the Phenomenalist does not succeed. What he produces as a substitute for the common sense "material object" is not a satisfactory equivalent.

The basic element in terms of which Phenomenalists endeavour to explain experience is the sense-datum, the object which is immediately present to consciousness. The first difficulty which Phenomenalists encounter is that they find it difficult to answer the question, "What is a sense-datum?" It is certainly not easy to answer the question, "What is the ultimate ontological status of sense-data?" But Phenomenalists find it difficult to answer even the question, "What

elements in experience are to be identified as sense-data?"

The reason why the Phenomenalist finds this a hard question to answer is that in the Phenomenalist system, the sense-datum must perform two different functions which are not altogether compatible. On the one hand, the sense-datum must be the entity which is immediately present to consciousness--and this, it would seem, is infected through and through by subjective conditioning. On the other hand, sense-data are the bricks out of which the Phenomenalist has to construct the external world. If one makes a radical distinction between external objects and the contents immediatly present to consciousness, one has no misgivings about accepting all features of sense-data which are due to subjective conditioning. But the Phenomenalist, who must build up his external world out of sense-data, is understandably reluctant to admit as characteristics of sense-data all features of what is immediately before the mind. If he admits, for example, that the sense-data exhibit the emphases and stresses which are due to the attention of the subject, he will find it increasingly difficult to build up an external world out of such entities.

We may illustrate this difficulty if we take up again the case of the camouflaged frog which was discussed in Chapter II.* If a certain pattern in one's visual experience is emphasised, one sees the frog: if another pattern is emphasised, one sees only stones and leaves. The Phenomenalist

* cf. above, pp.28-30.

must face up to the question, "Are these divergent emphases part of the sense-datum on each occasion, or are they not?" In a sense, this is not a difficult question for the Phenomenalist, since it is very plain what answer he must give to it. He must admit that the emphases are characteristics of the sense-data. Otherwise, he would have to admit a distinction between what a sense-datum is in itself and how it appears to the subject. And he cannot possibly admit such a distinction, since a sense-datum is by definition what appears to the conscious subject. Yet, in another sense, the question is a difficult one for the Phenomenalist, since the answer which he has to give considerably complicates his theory, and makes the construction of the material world out of sense-data a more difficult task.

There is another difficult question for the Phenomenalist besides "What is a sense-datum?" This is "What is a sense-datum?" That is, how much of what is presented to the subject at any moment is to count as a single sense-datum? Is the entire visual field one sense-datum? Or is the visual field constituted by a very large number of infinitesimal sense-data? Or is what the plain man would consider a surface of a single material object such as a book or pen, one sense-datum? The Phenomenalist, because he wishes to construct material objects out of sense-data, is naturally inclined to accept the third suggestion, but it is not clear that he is entitled to do so.

If a Phenomenalist is aware of the above considerations, he will find it more difficult in practice to explain how we construct our common sense material world out of the contents given in immediate experience. He will have to explain how we come to discount the stresses in the presented content which are due to the focus of our attention. And he will have to explain how we manage to break up the sense-field into portions which approximate to the surfaces of material objects. But these are merely practical difficulties which may perhaps be overcome. What we now wish to show is that even if these difficulties did not exist, or could be overcome without making implausible assumptions, a difficulty in principle would remain which would be an insuperable obstacle to the proposed reduction of material objects in terms of sense-data.

The obvious difficulty which must be tackled by anyone who intends to reduce material objects to sense-data is that a material thing can exist, even if it is not perceived, whereas a sense-datum, it is supposed, cannot. Thus, when I assert the existence of a certain material thing, I am not merely asserting the existence of a certain sense-datum, or group of sense-data. For the material thing may exist even if there is no one to observe it, and where there are no observers, there are no sense-data. In order to get round this difficulty, Phenomenalists must introduce the conception of "possible sense-datum", or something of the sort. A material thing, it may be urged, is not indeed a group of <u>actual</u> sense-data, but it is

a group of possible sense-data, which may be actual if the appropriate observers happen to exist. But this suggestion is far from satisfactory. For what exactly is meant by "possible sense-datum"? There are two ways in which the term may be understood. By "possible sense-datum" may be meant a particular existent very like an actual sense-datum, the only difference being that an actual sense-datum is in fact sensed by an observer, whereas a possible sense-datum is not. Or else, by "possible sense-datum", one may mean simply that if an observer fulfils certain specified conditions, it is possible for him to observe a sense-datum with a certain character. That is, the statement, "There is a blue, rectangular, possible sense-datum on the other side of this book" will be equivalent to the statement, "If an observer goes round to the other side of this book and looks, he will have presented a blue, rectangular sense-datum." But no matter which of these two interpretations is accepted, there is a cogent objection which cannot be escaped.

If by "possible sense-datum" is meant a particular existent very like an actual sense-datum, what evidence is there which would lead one to accept the existence of such entities? Phenomenalists are attempting to reinterpret the common sense belief in material things, because they believe that there is no justification for assuming the existence of beings distinct from the content presented in experience. But anyone who took possible sense-data to be particular existents would surely

be making just this assumption, and in addition, the very implausible assumption that the beings beyond the given content are exactly like what is given to consciousness.

Phenomenalists, who are particularly anxious to avoid accepting the existence of anything which is not warranted by the facts, have usually rejected this interpretation of "possible sense-datum". But if what is meant by a "possible sense-datum" is no more than a possibility of an observer having an actual sense-datum, if certain conditions are fulfilled, the objection is that a group of possible sense-data cannot be exactly equivalent to what is usually meant by a material object. For a material object is a particular existent, whereas a possibility of obtaining sense-data by following specified procedures is not.

This point is perhaps more manageable if it is discussed in terms of statements. The Phenomenalist contention is that the categorical statement made by the plain man when he asserts the existence of a material object is reducible to and exactly equivalent to a group of hypothetical statements which affirm what sense-data are obtainable by an observer who fulfils certain specified conditions. The question is, "Can a group of hypothetical statements about sense-data replace without loss of meaning a categorical statement about a material object?" The answer to this question depends on how one interprets these hypothetical statements.

If one believes that the connection asserted in a

hypothetical statement is a connection which must have some ground or reason in the nature of reality, then it is plausible to maintain that in the case of a hypothetical statement concerning what sense-data are obtainable in certain specified conditions, the justifying ground which is assumed is the existence of a material object of a certain kind. If this is so, when the Phenomenalist translates the statement, "There is an (unperceived) tomato to the left of the table" as, "If I look to the left of this brown, rectangular patch, I shall see a red, bulgy patch", he may be covertly assuming the existence of a material object as the ground which justifies his hypothetical assertion. The plain man would certainly make this assumption, and if asked to justify a hypothetical assertion such as the above, he would be sure to answer "bedause there is a tomato there". Now, if the existence of a material object is implicitly asserted by the hypothetical statements to which the Phenomenalist reduces a categorical material object statement, then assuredly, this group of hypothetical statements asserts no less than the categorical statement which it translates. But this does not mean that the Phenomenalist has succeeded in reducing the categorical assertion that the external thing exists to a group of hypothetical statements: nor has he defined it in terms of hypothetical statements; for the equivalence between the definiendum and the supposed definition is due to the fact that what is to be defined reappears covertly in the definition.

But a thoroughgoing Phenomenalist could not and would not accept the thesis that what is apparently a hypothetical statement about sense-data implicitly contains a categorical statement about material objects. To accept this would be to abandon his whole position. Nevertheless, one may argue that the Phenomenalist view derives a good deal of whatever plausibility it has from the fact that one may be unconsciously influenced by the concealed presupposition of the hypothetical statements.

A Phenomenalist must explicitly deny that the hypothetical statements about sense-data with which he equates common sense material object statements do assume covertly the existence of material objects. And if he is asked to give a reason for his assertion, "If I look to the left of this brown, rectangular patch, I shall see a red, bulgy patch", he must not, like the plain man, reply that there is a tomato there. He must refer instead to certain experiences he has had in the past which justify his prediction that if he looks, he will see a red, bulgy patch. And if it is objected that what has happened in the past is no infallible guarantee of what will happen in the future, the Phenomenalist would agree, but would maintain that this is the only justification which can be given.

But if hypothetical statements about sense-data do <u>not</u> implicitly assume the existence of material objects, it can hardly be maintained that they are equivalent to categorical material object statements. For common sense statements

about material objects assert the real existence of particular beings, whereas hypothetical statements about sense-data do not. They simply affirm what will be observed if certain conditions are met, or what would be observed if certain conditions were met. They do not assert the actual existence of anything. Therefore, the common sense material object sentences and their Phenomenalistx translations are not exactly equivalent. It is, of course, possible that the Phenomenalist translations reproduce the truths contained in the common sense statements, and merely purge them of a mythical element. But we agreed above* that if Phenomenalism is to be admitted to the short leet of epistemological theories which explain the facts, it must be prepared to come to terms with what the plain man believes.

There is another argument against the Phenomenalist reduction of categorical material object statements. This argument is that no matter how large is the group of hypothetical statements about sense-data with which the Phenomenalist equates a specific material object statement, it is always possible that the material object statement is false, even if all the hypothetical statements about obtainable sense-data are proved true by actual verification. Therefore, the common sense statement and its Phenomenalist translation are not logically equivalent.

It is ironical that the very consideration which led

* pp.48-49.

Descartes to put in question the existence of the material world should provide a damaging objection against Phenomenalism. This is the fact that the existence of a material object can never be conclusively established beyond all possibility of doubt. Thus, the fact that we continue to obtain the appropriate sense-data when we follow the specified procedures does not prove that the material object exists, for we may be deceived by an extremely persistent illusion or hallucination. Usually, illusions are dispelled very quickly by subsequent investigation. The thirsty traveller in the desert sees an oasis a short distance away, but when he reaches the spot, the oasis has disappeared, and he knows that he was deceived by a mirage. But on another occasion, subsequent observations might confirm the supposition that the oasis is there, and yet that supposition might be false. One might seem to touch the palm trees and taste the water, and yet this might be part of the hallucination. Similarly, we can never be perfectly sure of the real existence of the things which we seem to see around us in normal life. It is perfectly possible that, as in the schoolboy's essay, we shall "wake up and discover that it was all a dream". Certainly, this is a possibility which for practical purposes we can usually discount; but the fact that we can conceive of a case where a material thing does not exist, even when all the relevant observations, no matter how numerous, yield the appropriate sense-data, proves that we do not mean exactly the same thing when we assert the existence of a material

object as we mean when we assert the truth of a finite number of p hypothetical propositions about sense-data.

Moreover, we can also conceive of a case where a material object statement is true, even when one or more of the hypothetical assertions to which it is supposed to be equivalent is or are false. For sometimesmes, we believe, a material object may exist even if an observer fails to obtain the sense-datum which is usually appropriate in the circumstances. An extreme case is a blind man who does not have visual sense-data, even although material objects are visible.

It might seem that one could get round this difficulty by introducing the notion of a "normal" observer. Suppose one says that the categorical statement that a certain material object exists is equivalent to a group of hypothetical statements which assert that a <u>normal</u> observer will obtain certain sense-data, if he follows certain specified procedures. In this way, one might account for the fact that we are sometimes prepared to disallow the report of an observer who fails to obtain the appropriate sense-data after following the specified procedures. We disregard the reports of those who are not <u>normal</u> observers.

But this suggestion will pass muster only if one does not inquire too closely into what exactly is meant by a "normal" observer. It would seem to mean one of two things. When one requires that the observations be made by a "normal" observer, one might simply be specifying more exactly the conditions under which the observations must take place.

Suppose the Phenomenalist translates the sentence, "There is an (unperceived) tomato to the left of the table" by a group of hypothetical statements like, "If a normal observer looks to the left of this brown, rectangular patch, he will see a red, bulgy patch." If he is asked to cash this term, "normal", he may reframe the hypothetical sentence as follows: "If an observer passes all known tests of normality--for example, the test for colour blindness--and if he looks to the left of this brown, rectangular patch, he will see a red, bulgy patch." But it is impossible to specify the conditions which the observer must fulfil with sufficient exactness to make it inconceivable that the material object statement is true, when the prescribed sense-datum is not obtained. For there is always the possibility of a misperception which is due to an abnormality which has not been explicitly guarded against.

The second possibility is that a "normal" observer means an observer who, when the material object exists, always obtains the prescribed sense-datum, if he follows the required procedures, so that it will be impossible, by definition, for a material object sentence to be true, if the appropriate sense-datum is not obtained by a "normal" observer. The snag is that this definition of normality involves a reference to the existence of a material object; and the conception of normal observer was introduced for the express purpose of making possible a successful reduction of categorical statements about the existence of material objects to hypothetical statements

about sense-data.

It is worth noting that in The Problem of Knowledge (pp. 118-129), Professor A.J. Ayer maintains that arguments along this second line of attack are conclusive against Phenomenalism, but that the first argument we gave* is without "any logical force". He believes that Phenomenalism should not be rejected simply because it replaces categorical statements about physical objects by hypothetical statements about sense-data: he relies on the argument that it is not even theoretically possible to produce a group of hypothetical statements which will be logically equivalent to a given material object. It is never inconceivable that a material object sentence is false, even when the hypothetical statements with which it is equated are all true; and it is never inconceivable that a material object statement is true, even when one or more of these hypothetical statements is or are false. The reason why Ayer takes up this position is that he interprets the thesis of the Phenomenalist as a "logical" thesis which must be subjected to a "logical" examination. According to Ayer, the Phenomenalist claim is that a group of hypothetical statements about sense-data may be substituted for a physical object statement in such a way that this substitute is always true when the original statement is true, and is always false when the original statement is false. In order to substantiate this claim, the Phenomenalist does not require to show that

* above, pp. 78-81.

categorical statements about material objects are not implicitly assumed by the hypothetical statements which he uses in his translation. On the other hand, his claim is decisively refuted, if it is impossible, in principle, to produce a group of hypothetical statements such that it is inconceivable that the categorical statement and its translation should have different truth values.

But we take the Phenomenalist to sustain, not a logical, but a metaphysical thesis. The Phenomenalist makes the metaphysical assumption that only sense-data are immediately experienced. The metaphysical version of Phenomenalism is both easier and more difficult to refute than the logical version. It is more difficult to refute, because Phenomenalism, interpreted as a metaphysical theory, may be true, even if it cannot produce translations which are logically equivalent to categorical material object sentences. For it is not a conclusive refutation of Phenomenalism to prove that its fundamental metaphysical assumption cannot be reconciled with the common sense belief in material objects. We maintained, however, that Phenomenalism cannot be considered a plausible hypothesis, unless it can come to terms with the common sense belief in physical objects. If this is so, the metaphysical version of Phenomenalism is easier to refute than the logical version. For if the thesis of the Phenomenalist is metaphysical, he must do more than provide a translation which has necessarily the same truth value as the material object sentence translated:

he must reduce material object statements to hypothetical statements which do not themselves implicitly presuppose assertions about material objects. We have shown that this cannot be done without leaving out an indispensable part of what is meant when the existence of a physical object is asserted. The Phenomenalist must leave out the belief that there is a particular existent which extends beyond any actual sense-data experienced. And if this omission is not thought sufficiently serious to warrant the rejection of Phenomenalism, the other arguments which we have used will not have any more success. The arguments which are effective against the "logical" Phenomenalist will be effective against the "metaphysical" Phenomenalist, only if the cogency of our first argument is admitted. For if a "metaphysical" Phenomenalist is entitled to deny that a material object statement affirms the existence of a particular being, he can reply to the arguments which Ayer is prepared to endorse.

If it is legitimate for a Phenomenalist to maintain that the plain man is mistaken when he believes that to assert the existence of a material object is to affirm the reality of a particular existent, then the Phenomenalist may also maintain that the plain man is mistaken when he imagines that it is possible to assert definitely the existence or non-existence of a material thing. If the concept of "material thing" refers to a definite, particular being, then either this thing exists, or it does not exist; and it is clearly meaningful to assert

without qualification that a material thing exists, even if one could never have evidence which would justify so dogmatic an assertion. But if the concept of "material thing" does not refer to a definite particular being, if when one asserts the existence of a material thing, one is not affirming the reality of an individual existent, then it is no longer self-evident that it is even significant to make the unqualified assertion that a certain material thing exists, or does not exist. It is therefore possible for a Phenomenalist to argue that it is strictly significant to say only that a material thing very probably exists, or very probably does not exist. We naturally suppose, indeed, that the statement, "It is probable that this tomato exists", could not be significant unless the statement, "This tomato exists" were also significant. We imagine that the notion of the definite existence of a being is involved in the notion of its probable existence. But a throroughgoing Phenomenalist may challenge this. He may make use of a Kantian distinction, and maintain that the notion of the definite existence of a physical thing is simply a regulative idea which leads us to seek out evidence which will permit us to assert that it is more and more probable that the physical thing exists. The notion is not a constitutive idea which declares that a physical thing must either exist or else not exist, even although we can never know with certainty which alternative is true. Therefore, the series of statements asserting the probable existence of a material thing need not

presuppose the significance of a statement asserting the definite existence of the material thing. This statement is simply the ideal limit of the series, and is strictly no more significant than the assertion that there will be a future event at an infinite distance from the present, which is the ideal limit of the series of meaningful assertions which maintain that there will be future events at an ever increasing distance from the present. The Phenomenalist argues that "material object" language is no more than a shorthand way of dealing with the sense-data which are actually presented, and beliefs about what sense-data would be presented, if certain conditions were satisfied. He would agree that one can assign no definite limit to the class of hypothetical statements about obtainable sense-data, which might be relevant to a certain material object. And he would agree that a statement which, without qualification, asserted the existence of a material object, would have to be equivalent to a completed class of hypothetical statements, which cannot, in principle, be produced. But he would not conclude that his theory is inadequate: he would argue that the simple statement that a material thing exists is strictly meaningless.

A Phenomenalist who adopts this line of defence can account for the facts which critics have considered conclusive evidence against Phenomenalism. He may reinterpret these facts in a way which is compatible with his own view. The critic may argues that any finite group of hypothetical statements

about obtainable sense-data might be all true, and yet the material object statement to which they are relevant might be false. The Phenomenalist would admit this fact, but would interpret it as follows: No matter how many hypothetical statements about obtainable sense-data are actually verified, this will do no more than make very probable the existence of the material thing in question. It is always possible that some further hypothetical statement will be confuted by experience in such a way that it becomes probable that the material x thing does not exist. The critic also argues that a material object statement might be supposed true, even although one of the hypothetical statements with which it is equated is shown to be false. But this fact will not disturb the hardened Phenomenalist. For he does not believe that it is any more significant to assert definitely that a material object statement is false than to assert definitely that a material object statement is true. He is perfectly prepared to admit that the falsification of a relevant hypothetical statement does not prove definitely the non-existence of the material object in question: at most, it makes the existence of the material thing highly improbable. And he can admit that it is always possible that some further observation may lead us to discount the falsification of a hypothetical statement, because some abnormality in the observer is suspected.

The Phenomenalist is taking up a very extreme position when he maintains that material object statements are not

definitely true or false, but only probable or improbable. But he can do something to conciliate the plain man. He can admit that the plain man's affirmation that such and such a material thing exists, or does not exist, is perfectly legitimate for practical and everyday purposes, just as one can admit that for practical purposes we are often entitled to say that we are <u>certain</u> that such and such a material thing exists. But he would argue that just as we must confess that the existence of a specific material thing is never absolutely certain, so we must admit that an unqualified assertion that a material thing exists is not strictly meaningful.

Thus, the only effective argument against the metaphysical version of Phenomenalism is the simple argument that the Phenomenalist is forced to contradict the plain man's belief that when he makes a material object statement, he is asserting the existence of a particular being. And the greatest ingenuity of the Phenomenalist cannot make plausible such a disdain of common sense, if, as we maintain, there is another possible epistemological theory which has a greater respect for the plain man's beliefs.

If the common sense belief in material objects cannot be reduced to beliefs about sense-data, actual and possible, there must be in experience another element in addition to the presented sense-data. Professor H.H. Price, who is in general sympathetic to the Phenomenalist approach, recognises its limitations in this respect and introduces, in order to make

good its deficiencies, the notion of "material thinghood", which "is an *a priori* notion, which cannot be reached by inspection of sense-data and abstraction of their common characteristics."* Now certainly, some such notion, which is *a priori*, in the sense that it is not derived from the sense-data presented in experience, is required, unless one is prepared to make a complete break with the common sense view. But it is necessary to determine what is the origin of this notion, and what is its justification. Price suggests that the notion of material thinghood is an "innate idea" in terms of which human beings are constrained to interpret their experience. But it seems much more plausible to say that the notion of material thinghood is derived from experience, although from an experience distinct from and in addition to the experience of the sense-data immediately presented to consciousness. The suggestion that the conception of material thinghood is an innate idea can be seriously considered, only if no direct experience of external physical beings is thought possible. We have argued that an immediate experience of external beings is perfectly possible, and we shall defend our view in more detail in a later chapter. Price's assumption that the notion of material thinghood is an innate idea would seem to be an *ad hoc* hypothesis, advanced for the express purpose of reconciling his assumption, that sense-data alone are immediately experienced, with the plain man's belief in material things. This

* *Perception*, p.306.

hypothesis does nothing to explain the origin of the notion of material thinghood, and it certainly does nothing to justify its objective validity.

V. There is another powerful argument against Phenomenalism which we have been keeping in reserve. This argument has an equal force against Phenomenalism, Solipsism, Cartesianism, and any theory which maintains that experience is basically the inspection of the sense-contents present in consciousness. So far, we have argued that the Phenomenalist assumption that a subject can experience only sense-data is not necessarily true, that an experience of a reality distinct from sense-data is not impossible. And since this is so, the Phenomenalist is not in a position to contradict the common sense belief in material objects: he must come to terms with common sense: and this, we have seen, he cannot do. We now wish to make a direct attack on the fundamental tenet of Phenomenalism, that experience is essentially an immediate awareness of sense-data. We wish to show that this assumption, far from being necessarily true, is not even plausible.

Although we cannot claim that the existence of an experience of external objects distinct from sense-data may be discovered by simple introspection, there is good evidence which suggests that the structure of experience is very different from what the Phenomenalist believes. Experience is not the mere contemplation, entertainment, enjoyment, or inspection

of certain sense-data or sense-dontents: experience is ~~x~~ essentially judgment. Experiencing is not simply a matter of having sense-data: when we experience, we are making a claim, affirmation, or assertion about an external reality distinct from the content presented to consciousness. It is true, indeed, that an experiencing subject is not always making explicit judgments about an external reality. It is only in special circumstances that he takes the trouble to put into words what he believes about the external world. But nevertheless, one can maintain that experience is implicit judgment. An overt judgment simply makes ~~i~~ explicit what is usually implicit in experience: it is not a mental activity radically different in nature from the normal processes of experiencing. Even when we do not formulate a judgment, we are not content to accept passively what is presented to consciousness. We ascribe what is before us to a real external world, and we claim that this ascription is true. When we "see" a material object, e.g. a book, we are implicitly claiming that what we see is real. And we are willing to grant, in the case of an illusion, that we have made a mistake, even if we have not committed ourselves to an explicit assertion.

Now, if experience is essentially judgment, if in experience the subject ascribes the given contents to an external reality, there must be a primitive awareness of this external reality in addition to the awareness of the sense-contents. One could not refer sense-data to an external

reality unless one believed in its existence, and the only basis for such a belief would seem to be an actual experience of the external reality in question. The reason why this primitive awareness presupposed by common sense judgments about the world cannot be detected by simple introspection is that, at the level of consciousness, it never occurs in isolation from the rest of experience. Conscious experience normally consists of judgments, which presuppose an awareness of their subjects, the things in the external world, and an awareness of their predicates, the given sense-contents. The awareness of sense-contents may be isolated on introspection, but the awareness of external beings cannot--at least not in the same way. The evidence for its existence is that it is an essential presupposition of empirical judgments.

Because the awareness of sense-data can be isolated in experience, it might be supposed that this awareness is the fundamental and essential element in conscious experience, and that the activity of judgment is accidental and secondary. Experience, it might be said, is essentially the inspection of sense-contents, although the experiencing subject is compelled by the exigencies of practical life to make judgments and assertions which go beyond the immediate data which are presented. Experience is a two stage process: first, the subject passively entertains the sense-datum and <u>then</u> refers it to an external reality.

But this suggestion is not supported by the evidence.

The fact that one can isolate the awareness of sense-data does not prove that this awareness is the first stage in the process of experiencing--a stage at which one's experience might conveniently stop, were it not for the practical necessity of discovering what is likely to happen in the future. It is quite false that the mere entertainment of sense-data is the most primitive experience: to entertain sense-data without ascribing them to reality is to accomplish a feat of which only a highly developed subject is capable. For this feat requires the deliberate suspension of judgment; and perhaps, only a philogopher is enough of a sceptic completely to suspend judgment about the external world. And the experience of a philosopher who makes such an experiment is never a mere entertainment of sense-data; for, in the background, there is always an awareness that judgment has been suspended. Thus, our ordinary concrete experience is always judgment, and the sense-contents come to be, only as elements in judgment. The mere awareness of sense-data is isolated by an abstraction from the concrete experience which is revealed by introspection.

But although the Phenomenalist must admit that in ordinary experience, we make judgments about the external reality, and do not confine ourselves to the mere entertainment of sense-data, this is not a conclusive refutation of his position. For he can always argue that experience really is a two stage process, even if the two stages are usually run together in such a way that they cannot be distinguished by

introppection. But the theory that the experiencing subject is first presented with sense-data and then makes judgments which go beyond the presentations is a mere hypothesis. It is certainly not necessitated by the f evidence of introspection: indeed, that evidence, for what it is worth, supports the opposite view.

To sum up this discussion of Solipsism and Phenomenalism, we shall state briefly what we believe to have been established. The basic assumption of these theories, that what is fundamental in experience is the awareness of sense-data, may be true, but its truth has not been demonstrated and the evidence of introspection suggests that it is false. And even if judgments about an external reality were secondary and inessential, they could be incorporated in the Phenomenalist system, only if a vital part of the common sense belief was left out. Again, it is possible that the plain man is mistaken when he accepts the existence of external and independent objects beyond the given sense-data. Nevertheless, Solipsism and Phenomenalism are improbable and farfetched hypotheses, since they deny that experience really is as it seems to be, and since they deny a common sense belief which one is extremely reluctant to abandon. The main reason why Solipsism and Phenomenalism have been taken seriously is that it has been thought that no alternative is possible. But we have seen that there is no reason to reject the supposition that the subject has a direct awareness of external beings. We hope to strengthen our position in the

final chapter, where we explain in terms of our general metaphysical theory how it is possible for one being to experience another.

In conclusion, I wish to deal with a consideration which gives a specious plausibility to Solipsism and Phenomenalism. Although the chief defect of these theories is that they deny one of the assumptions of Naive Realism, that the subject experiences common sense material objects, they derive a certain plausibility from the fact that they accept another Naive Realist assumption, that experience is essentially the inspection of an object. They get round the obvious objections to that theory by claiming that the object inspected is a sense-datum, and not, as the Naive Realist believes, a concrete, physical being in an external world. But we have been arguing that the Naive Realist is right when he maintains that experience is concerned with external physical things, and wrong when he maintains that experience is the straightforward inspection of an object. We do not simply inspect the things in the world: we make judgments about them, and refer characteristics to them. Thus, Phenomenalism is really further from the truth than Naive Realism, since it endorses the errors and rejects the truths contained in that view.

The Phenomenalist doctrine that experience is the inspection of an object has generated a confusion which, if it is not detected, may make Phenomenalism seem more plausible than it really is. This is the confusion between appearing

to see an object and seeing an appearance, i.e. a sense-datum. If this identification is permitted, then the epistemologist must admit that the experience which he has to describe is an experience of appearances or sense-data. For when one reflectively examines one's experience, one can hardly report that one is seeing particular material objects such as tables and chairs. To say that one is seeing a table is to endorse the claim which is made in practical life, that there is a table before one. But since there is a possibility of error and illusion, a philosopher cannot commit himself to the assertion that the table exists. What he must report is that he appears to see a table. Now, if "appearing to see a table" is equivalent to "being aware of a table-like appearance", then the Phenomenalist description of experience will have been conceded. Experience will be an immediate awareness of certain appearances or sense-data. But "appearing to see an external object" is surely not at all the same thing as "seeing an (internal) appearance or sense-datum". For, a subject who "appears to see an external object" is making a claim about an external reality, even if the validity of this claim is not granted by the subject qua philosopher. But if experience is simply an awareness of appearances or sense-data, that is all there is to it, and one has no justification for believing in the existence of external things. In short, by identifying "appearing to see a thing" and "seeing an appearance", the Phenomenalist has reduced a judgment about an external reality

(although this judgment may be false: that is the force of the "appear") to a mere immediate awareness of sense-data. But if the objections to Phenomenalism given above are valid, such an identification is clearly illegitimate.

Note. We must reconsider the question, "Is it even logically possible to doubt the existence of an external reality beyond the experiencing subject?" If our thesis, that experience is essentially judgment, is correct, if in all experience the subject is referring to an external reality the content immediately before him, if the existence of an external reality is a presupposition of all experience, how can it be doubted that such an external reality exists? We argued above that Descartes could show only that any sense experience might be mistaken, and not that all sense experiences might be mistaken. But even if all sense experiences were mistaken, it would not follow that the existence of the external world could be doubted, for the existence of an external reality is a presupposition of all experience, even if we are always mistaken in the characters which we ascribe to it. These considerations certainly make it very difficult to doubt that there is an external reality, but do they make it logically impossible? For is it not logically possible that this presupposition of all experience is false? We may assume in all experience the existence of an external reality, and yet this assumption may be mistaken. Therefore, if one is to argue that the existence of an external

reality cannot logically be doubted, it is not enough to point out that an external reality is assumed by all experience. One would have to maintain that all judgments necessarily involve not only a judging subject, but also an external reality about which the judgment is made. If this were so, the existence of this external reality could not be doubted, for a judgment which denied its existence would be self-contradictory, since it would deny the very thing which, qua judgment, it must assume. But although judgments are about reality and claim to be true of reality, they are not necessarily about an external reality beyond the judging subject. It is surely legitimate to make a judgment which excludes from reality everything except the subject and his act of judgment. We must therefore admit that it is logically possible to doubt that there is an external reality.

CHAPTER FOUR.

BRADLEY.

I. The main object of the previous chapter was to show that reality extends beyond the contents given to the consciousness of the experiencing subject. The arguments presented were directed against the Solipsist, who is uncompromising in his rejection of the plain man's belief in an external reality, and against the Phenomenalist, who does try to come to terms with common sense, but whose analysis of the plain man's belief must leave out what is most essential. These arguments were not, indeed, completely conclusive, but they were powerful enough to secure the central assumption of this thesis against attacks from the side of Solipsism or Phenomenalism.

But to exhibit the implausibility of denying the existence of a reality beyond the contents of one's consciousness is not sufficient to establish against all possible attacks the assumption that the conscious subject is a real substantial being who experiences other real substantial beings. For although we have defended the existence of external things which do not depend on the consciousness of a subject who may experience them, we have not shown that these things are independent substances, and we have not even shown that the conscious subject is an independent substance. It may be that reality is a single whole of which the finite self is a mere fragment,

insubstantial by itself and relative to the complete reality in which it is included. What has been established is the existence of a multiplicity of elements--conscious subjects and "physical things" beyond the contents of consciousness. But what has been said so far has done nothing to decide the problem of the One and the Many raised in the first chapter. It is possible that it is these many elements which are the substantial beings and the final realities and that the whole which they compose depends on its constituents: but on the other hand, it is also possible that it is the whole which is the substantial reality and that the many elements are no more than dependent parts or aspects of this whole. This second alternative is accepted by F.H. Bradley, and his view must be examined carefully and in detail.

Bradley does not make the mistake of the Solipsist: he does not believe that the mind is a mere container into which all the varied content of experience must be packed: for he argues that thought is essentially an activity of judgment whereby the ideal content is necessarily referred to a reality beyond the judging mind. Nevertheless, Bradley's contention that in the last analysis, the finite self is unreal and insubstantial would seem to conflict with common sense no less seriously than the Solipsist doctrine that there is nothing apart from one's own consciousness, and the common sense philosopher may be tempted to dismiss Bradley's system as ingenious sophistry which no one can accept, however difficult

it may be to refute it by logical argument. Now, we certainly could not agree that Bradley may be decisively refuted merely by an appeal to the verdict of common sense; for this would be, in effect, to condemn Bradley unheard by a snap judgment based on a superficial survey of the situation. But on the other hand, one can hardly maintain that one's instinctive opposition to a theory which denies the substantial reality of the self is entirely without significance. In order to determine the mean between these extremes, it will be necessary to consider briefly the nature of common sense and the extent of its authority in the present context.

Common sense, is, as it were, the first precipitate of experience: it is the original crystallisation of experience in thought and language. Since the task of philosophy is the elucidation of experience, the spontaneous description of experience provided by common sense can hardly be disregarded. But the common sense description of experience is by no means above criticism--reflection may lead us to modify or revise this unreflective account. The deliverances of common sense have more weight in some cases than in others. The Solipsist is in a weak position because his doctrine flatly contradicts the very fundamental common sense belief in an external world. But the beliefs of the plain man do not have the same force against Bradley's view. The plain man may affirm that he exists and that he is a real being, in the sense that he is no mere figment of imagination. But Bradley does not wish to

challenge this: what he denies is that the finite self is an ultimate reality and an independent substance. And the plain man cannot question this, for he does not grasp what is at stake--he has not attained a level of philosophical development which would make it possible for him to hold a theory which contradicted that of Bradley. The plain man is in no position to say definitely whether the self is an independent substantial reality, or an appearance of the one all-comprehensive reality. But although the philosopher's description of experience must go beyond common sense, some philosophical interpretations may involve a much more extensive modification of common sense than others. And if one interpretation demands a radical change in our common sense beliefs, whereas its competitor seems to be a simple development of common sense, then it is plausible to argue that the second interpretation is to be preferred. Now, at the level of common sense, the self is a final reality, so that a philosophical view which permits the self to retain this status will have the advantage over a view which introduces the conception of a reality which transcends the common sense ultimate. This means that Bradley must bear the main onus of proof. He must show that no system of metaphysical pluralism in which finite selves are regarded as substantial beings is possible. And if one can construct a system which is not demolished by the arguments which Bradley directs against metaphysical pluralism, this will <u>almost</u> amount to a disproof of Bradley's position. And this is, indeed, the argument

on which we shall have to rely.

The discussion of Bradley's philosophy has more than a merely negative importance in the scheme of this work. It is intended to do more than to remove the opposition of a formidable rival. It will introduce two of the most important problems confronting the metaphysical pluralist--the problem of reconciling the relatedness of finite substances with their substantial independence, and the problem of the relation between thought and reality. It will have the effect of leading the discussion to a new and deeper level.

II. It will be necessary to consider Bradley's view at some length in order to become clear about what is involved in his difficult and subtle theory. Bradley maintains that his fundamental assumption is that "truth has to satisfy the intellect, and that what does not do this is neither true nor real."* This is an assumption with which it is difficult to find fault: indeed, one might claim that "intellectually satisfactory" is a proper definition of "true". But if Bradley's assumption merely states a definition, it would not seem that one could derive from this assumption consequences of any importance . Thus, one may suggest that the real assumption which Bradley makes is his conception of what will satisfy the intellect and what will not. For Bradley

* F.H. Bradley, Appearance and Reality, 4th impression (London, 1906) pp. 569-570.

interprets what is necessary for the satisfaction of the intellect in so stringent a way that no thought or system of thought can measure up to what the intellect requires and demands. According to Bradley, the intellect has a criterion which compels it to reject as unsatisfactory whatever is not perfectly self-consistent.

We may distinguish two parts in this requirement of self-consistency. To satisfy the intellect, a thought or judgment must not be self-contradictory and it must be self-contained, absolute and unconditioned. A judgment will not be true unless it satisfies both these criteria. A judgment will not be intellectually satisfactory, if it contradicts itself, or if it is subject to and relative to an external and unknown condition. It is crucial to our argument to take the principle that satisfactory judgments must be unconditioned as a distinct assumption in Bradley's system. If Bradley's only assumption were the Law of Contradiction, his position would be impregnable.

In this section, we shall first show how Bradley proves that judgments which claim an unconditioned truth inevitably contradict themselves. Bradley's argument does not prove that all judgments necessarily involve a contradiction, but only that no judgment can be both unconditioned and non-contradictory: a judgment may escape self-contradiction, if it is conceded that the transition in the judgment depends on an external ground. Then, we shall discuss the consider-

ations which support Bradley's view that a judgment which is subject to an external condition is not intellectually satisfactory.

The most concise and the most effective presentation of Bradley's argument, that a judgment which is taken as unconditioned must contradict itself, is to be found in Appearance and Reality, (2nd edition) Note A. Bradley begins this note by giving his explanation of the nature of contradiction. He holds that the essence of contradiction is the unification of differences in thought without a ground of union and distinction. Without a ground of connection and distinction, thought is forced to unite in a bare point the differences with which it attempts to deal; and this is tantamount to the identification of what is different, which is obvious contradiction.

Thus, there are no elements which are guaranteed by their very nature against conflict with other elements. All diversities whatsoever become contraries if thought combines them without a ground of union and distinction. We do not usually treat as potential contraries red and square, for example; for when we attribute these characters to the same object, we assume in the object a ground capable of reconciling their differences. But certainly, red and square become mutually contradictory if they are simply identified.

On the other hand, there are no diversities which are

"intrinsical opposites".* We may think that "round square" is a contradiction in terms. But this is because we are implicitly excluding from reality any possible ground of union and distinction. When we call "round square" a contradiction, we are assuming that it is the same surface of the same object which is being taken to be at once square and round. But square and round are not essential contraries. They do not conflict if there is a ground of union and distinction in the reality to which they are attributed. The peaceful co-existence in the same universe of square things and round things is perfectly possible.

Now, it is of the essence of thought to unite differences: for thought without differences is bare tautology, and as Bradley says, "A bare tautology .... is not even as much as a poor truth or a thin truth. It is not a truth in any way, in any sense, or at all."** Thought must unite differences--the question is, "How can thought obtain the ground of union and distinction which is necessary if its unification of differences is not to be a self-contradictory identification of opposites?" Bradley answers that there is no way in which thought can obtain the ground of connection and distinction which it requires. Therefore, thought is compelled, against reason, to identify the differences which it finds, and this is self-contradiction. Let us examine the argument in more

* Appearance and Reality, p.566.
** ibid., p.562.

detail.

If thought is to have an unconditioned truth, it must somehow contain within itself a ground of unity and diversity which will permit a consistent movement from one element to another. There are two possibilities: thought may be able to produce this ground from its own internal resources; or else, thought may be able to receive into itself a ready-made ground given from outside. Bradley dismisses both these suggestions.

The first suggestion would be defended by a Hegelian who maintains that the diversities given in thought are "complementary aspects of a process of connection and distinction, the process not being external to the elements, or again a foreign compulsion of the intellect but itself the intellect's own proprius motus."* Bradley admits that such a "self-evident analysis and synthesis of the intellect itself by itself"* would satisfy in full the demands of the Law of Contradiction. The Hegelian dialectic in which each element is of itself a transition to another element is a system of thought in which the intellect would obtain complete satisfaction. For thought has here a mode of union which is not the sheer identification of differences. But there is a strain of Empiricism in Bradley's thought which makes it impossible for him to accept the solution offered by this thoroughgoing Idealism and Rationalism . He states

* Appearance and Reality, p.568.

that he is "unable to verify a solution of this kind".* The thought which we actually enjoy is always "the putting together of differences external to one another and to that which couples them."* The thought of which we have any experience is always a mere synthesis of differences without an internal ground of union and distinction, and we have no warrant for assuming the existence of a kind of thought so very different from the thought which we actually possess.

But the second suggestion seems much more promising. Thought certainly cannot conjure up from inside itself the ground which justifies its transitions: but this ground of connection and distinction is to be found in the external reality with which thought is concerned. To take a simple example, suppose that I judge that a certain circular patch is coloured red. When I assert that the circular patch is red, I am surely not identifying these two distinct elements. This would indeed be a contradiction. Rather, I am predicating redness of the circular patch. The "is" which is used in the judgment is the "is" of predication and not the "is" of identity. In predication, one connects two distinct elements, and the ground which justifies the connection while maintaining the distinction is the external reality to which the judgment is applied. It is the nature of the external reality which justifies the transition in the judgment from the conception of the circular patch to the conception of red.

* Appearance and Reality, p.569.

But what is at stake (Bradley would urge) is whether or not thought can accept this justifying ground which is offered from outside. Does one provide a sufficient justification for thought's transition from A to B when one asserts the de facto conjunction of A and B in an external reality? If the de facto ~~of~~ conjunction of A and B is to supply the ground and reason which mediates the transition from A to B, it must be brought within thought. But when the conjunction is brought within thought, it fails to provide the necessary ground of union and distinction, for it has become a discrete third element with which thought must somehow deal. Thought has no reason which justifies the transition from A to AB and from AB to B. And "Thought can no more pass without a reason from A or from B to its conjunction, than before it could pass groundlessly from A to B."*

Thus, a judgment cannot provide from within itself a ground of union and distinction, nor can it accept such a ground, if it is offered from the outside. This means that judgments must inevitably contradict themselves. And no one can deny that a judgment which contradicts itself is false and intellectually unsatisfactory. The Law of Contradiction is a principle whose truth is implicitly assumed in any attempt to doubt or deny it.

But the conclusion just reached is subject to a qualification. Judgments contradict themselves only if they

* Appearance and Reality, p.563.

claim absolute and unconditioned truth. A vital step in the ~~M~~ above argument is the premiss that an external ground which is supposed to justify the transitions of thought must be brought within thought. But this step is necessary, only if thought is demanding an unconditional guarantee of the validity of its transitions. We may legitimately assume a justifying ground ~~in~~ an external reality for a judgment which is content to be taken as conditioned and conditional. Thus, judgments may avoid contradiction if they do not make unwarranted pretensions. Without contradiction, one may in thought unite differences, provided that one accepts this synthesis in thought as conditioned, as subject to an unknown ground of union and distinction. So long as one makes no claim to an absolute and unconditioned truth, one may accept the transitions in one's thought as connections "the bond of which is at present unknown."*

Thus, our ordinary judgments cannot be rejected as intellectually unsatisfactory on the basis of the Law of Contradiction alone. There are passages which suggest that Bradley himself recognises that the Law of Contradiction, by itself, is not enough. He writes, for instance, "Yet while it [the assertion of any complex] offers itself as but contingent truth and as more or less incomplete appearance, the Law of Contradiction has nothing against it."** This would seem

* Appearance and Reality, p.564.
** ibid., p.567.

to imply that so long as a judgment does not claim to be absolute and unconditioned, it cannot be thought unsatisfactory because it contradicts itself--some other reason must be given.

We do not, however, rest our case on a single passage in Bradley's writings, taken out of its context. Our fundamental argument is that Bradley can prove that a judgment which depends on an external ground contradicts itself, only if he assumes that this external ground must somehow be incorporated in the judgment. He has not proved that such a judgment contradicts itself, iff the external ground is left outside, as it should be. Bradley, of course, does not have to admit that it is possible or legitimate to assume the existence of an external ground of union and distinction which justifies the transition in a judgment. But any valid objections which he may make against this assumption cannot be derived from the Law of Contradiction alone. For the argument which Bradley uses to prove that any complex assertion contradicts itself depends on the presupposition that the assertion cannot be justified by an appeal to an external ground.

The main difficulty which faces those who assume an external ground to justify the transitions in judgment, is the problem of explaining how it is possible to assert significantly the existence of such a ground. This is essentially the problem of explaining how one can think about a reality beyond thought. But before examining this difficulty in detail, we shall consider whether Bradley can reach his main conclusion

by establishing what we distinguished as his second fundamental assumption. Bradley has proved that discursive judgments are self-contradictory, if they are taken as unconditioned. If he can also prove that no judgment will be intellectually satisfactory, unless it is unconditioned, it will follow that no human judgment can satisfy the demands of the intellect.

Even if a judgment which does not claim to be absolute and unconditioned is not self-contradictory, such a judgment, Bradley holds, is by no means intellectually satisfactory. For thought has as its goal an absolute and unconditioned truth, and it will be fully satisfied by nothing less than this. Moreover, judgments which depend on an external condition are not even satisfactory as far as they go. It is natural to suggest that even if thought can never attain to the complete truth about reality, it may sometimes be satisfactory enough, in so far as it reaches a partial truth which at least contains no admixture of error. The deliverances of thought can never be "the whole truth", but they may sometimes be "nothing but the truth". But even this, Bradley would not concede. Such partial "truths" are by no means free from error, because the elements combined in the judgment would not remain unaltered if they were included in a completed system of truth which made explicit the condition which the judgment implicitly assumes. These elements are not simply fragments of reality: they are mutilated fragments, falsely abstracted from the context in which they have their being.

There is another argument which Bradley may use to prove that judgments which are subject to an external condition are not intellectually satisfactory. If the transitions of thought depend on a condition external to thought, the condition is unknown, and the transitions are, for thought, unintelligible. If thought is to understand its transitions--and it is not satisfied by transitions which it does not understand--thought must possess the reason for its transitions: and thought cannot accept as a reason an external condition of which it has no knowledge.

Thus, if satisfactory judgments may be neither conditioned nor contradictory, the intellect is never satisfied by the judgments which it makes. No judgment can fulfil both requirements of the intellectually satisfactory. A judgment which sets itself up as unconditioned can be shown to contradict itself, and a judgment can escape contradiction only by admitting that the transition in the judgment is subject to and governed by an external and unknown condition.

But an unfriendly critic might object that the standard set by Bradley is impossibly and unreasonably high. One cannot dispute that a judgment which contradicts itself is the reverse of satisfactory, but is it so clear that Bradley's second requirement is justified? Certainly, thought will always be unsatisfactory, if one will accept as satisfactory only an absolute and unconditioned system of thought in which all the transitions are fully intelligible. But is it

sensible to give the intellect a task which it cannot possibly accomplish, and then to reproach it because of its failure? The idea of a completely intelligible system may be an ideal to which thought ought to approximate as closely as possible, filling in where it can intermediate principles which in part explain its transitions. But to demand that thought bridge completely the gaps between the discrete elements with which it deals is to ask for something which thought, by its very nature, cannot supply. To some extent, thought may furnish elements which mediate its transitions; but ultimately, an appeal must always be made to a reality beyond thought. This does show that thought is in some sense limited and defective; but is it not a misleading exaggeration to say that thought is never intellectually satisfactory? It is not in the nature of thought to be an unconditioned reality. Thought is essentially thought about a reality beyond thought. Thought is necessarily subject to an external condition in that the transitions in thought are to be justified by a reference to the external reality with which thought is concerned. In order to satisfy the standards laid down by Bradley, thought would have to be identical with the complete reality. Now, it is unreasonable to condemn thought because it is not reality. Moreover, this supposed defect of thought which Bradley takes so much trouble to establish is the direct consequence of a fact which nearly everyone would admit--that reality is something more than thought. Bradley's central conclusion, boiled down, would

seem to be simply that thought is not everything; so that Bradley's philosophy, far from being too paradoxical to be taken seriously, is nothing but sound common sense.

Indeed, the critic might even say that Bradley's arguments are important, only because they constitute a refutation of the thoroughgoing Idealism which identifies reality and thought--a refutation which is framed in Idealist terminology and which Idealists cannot ignore. Bradley is usually considered an Idealist, but in fact, Idealists are the only philosophers who are embarrassed by Bradley's arguments. Bradley talks paradoxically about the inevitable contradictions in thought, but what his position amounts to is that reality cannot be exhaustively analysed in terms of abstract thought, that the concrete reality is a surd, irreducible in rational terms. Thus Bradley, in spite of the appearances, is really an ally of the Existentialists in their protest against Absolute Idealism, against the view that reality is neither more nor less than a complete system of thought. The Existentialists say that the existent reality is irrational or absurd, whereas Bradley says that reality is suprarational; but both parties agree that reality is, in some sense, non-rational, and the difference in language may simply reflect a difference in emotional attitude.

Such a reaction to Bradley's theory is very tempting. There are two very different ways of deflating a philosophical system. On the one hand, one may argue that the doctrines

of a philosopher are false and nonsensical: on the other hand, one may argue that the philosopher is expressing in an unnecessarily obscure way obvious truths which everyone has known all along. The above argument uses this second method; and this would certainly seem to be the most promising line of attack in the case of Bradley, on account of the extreme difficulty of producing a direct refutation of Bradley's careful arguments. But Bradley's elaborate dialectic is not so pointless as this critic is suggesting. And the point becomes clear when we meditate on the problem of asserting the existence of a reality beyond thought. Bradley does not work through a long and difficult argument, merely in order to prove that there is a reality beyond thought--a proposition which few would challenge. His purpose is to show how it is possible to assert a reality beyond thought, and this, he would argue, is something which is not shown by those who simply accept a reality external to thought on the basis of common sense. At first sight, there would seem to be no objection to asserting a distinction between thought and reality, but on reflection, this may come to seem a problem of almost insuperable difficulty. How can one assert a difference between thought and reality "without somehow transcending thought or bringing the difference into thought?"* In order to think of a reality beyond thought, it would be necessary for thought to go beyond itself, to have a certain self-transcendence. But how is this possible?

* Appearance and Reality, p.554.

Bradley has an answer, and one will be in no position to criticise Bradley unless one can suggest an alternative answer. Bradley's answer is that thought transcends itself, because it has claims and criteria which are never satisfied by thought. Thought "demands to be, and so far already is, something which completely it cannot be."* Reality is more than thought, and it is known to be more than thought, because reality is what satisfies the intellect, and the intellect has standards which thought as such can never satisfy. Thus, Bradley's contention that thought is never intellectually satisfactory is not merely the carping criticism of one who sets impossibly high standards. It must be possible for the intellect to make such a criticism of its own performance, if we are to be able to maintain that there is a reality beyond thought. Thought can, in a sense, attain to a reality beyond thought, because thought has criteria which it knows it cannot satisfy, and in recognising its own defects and limitations, thought has in some way transcended these limitations.

This problem of explaining how one canm assert the existence of an external reality beyond thought is, as we have already remarked, the chief difficulty facing those who wish to save ordinary judgments from contradiction by basing them on an external ground of union and distinction. Now, if it is possible to assert that there is a reality beyond thought, only because thought has a criterion which thought can never

* Appearance and Reality, p.555.

satisfy, it will not be possible to assume an external reality beyond thought, if one is attempting to prove that human judgments may satisfy all legitimate requirements. Therefore, the above criticism of Bradley's system will be valid, only if an alternative solution to the problem of thought and reality can be suggested. We shall consider whether or not there is a reasonable alternative in the final sections of the present chapter. In the next section, we shall discuss the positive knowledge of the general nature of reality which Bradley extracts from thought's criterion.

III. According to Bradley, thought possesses a criterion of reality, and it has therefore a positive knowledge of what would satisfy this criterion. This means that we have a positive knowledge of what reality must be like. This knowledge is, indeed, abstract and general: on account of its limitations, thought cannot present reality bodily and in full. Therefore, our knowledge of the general nature of reality must fall short of complete truth. Nevertheless, the knowledge of reality which is derived from thought's criterion may be said to be absolute knowledge when contrasted with ordinary empirical knowledge. For this metaphysical knowledge of reality is intellectually incorrigible, whereas our empirical knowledge is always liable to a possible intellectual correction. Our metaphysical knowledge is defective, because it gives us the bare outline of reality which must be filled in, if the

intellect is to achieve complete satisfaction. But this is a defect which the intellect as such can never remedy. To supplement its metaphysical knowledge of the general character of reality, thought would have to pass beyond itself and become identical with the concrete reality.

We must now examine the detailed content of this metaphysical knowledge of the general character of reality, which is the utmost to which thought can attain without becoming something other than itself. We know, first of all, that reality is one; for a plurality of unrelated reals is impossible. We cannot form a conception of a Many, unless we take the many beings to compose some sort of unity. We cannot think of a plurality without thinking of it as a plurality--one single plurality. It is impossible to think away the unity of the plurality and leave only the multiplicity. And we cannot suggest that reality might be something which we cannot consistently conceive.

Now, if the many beings must compose a unity, they must have some sort of togetherness and some sort of relatedness. But the above argument does nothing to determine the nature of this unity or the nature of the connections between the elements in the plurality. The unity of the plurality--the One--might be the ultimate substantial reality of which the many beings are mere parts of aspects. But on the other hand, the elements in the plurality--the Many--might be the substantial realities, and the unity of the plurality might depend on its

substantial components, and on the relations between them.*

Bradley maintains that it is the One which is substance. A substance and a final reality must have a certain independence and self-sufficiency, and the relations which must exist between the members of a plurality cannot be reconciled with their substantial independence. Bradley argues that the relatedness of beings is compatible with their independence, only if the relations between the beings are external, that is, make no difference to the terms they connect. But merely external relations are impossible. An element which is external to two terms cannot be used to connect them. It is a distinct item in the universe which must itself be connected with the original terms. And if we assume second order relations to connect the external relation with its terms, the same problem must be faced anew. We are committed to an infinite regress in which we multiply intermediaries without ever being able to bridge the gap. Thus, the relations between beings cannot be external relations which make no difference to the characters of the beings related. A thing must be affected by the relations in which it stands. The relations between the many beings in the universe must be internal; and if two beings are internally related, they are interdependent and are therefore not self-existent realities. The only way to deal with the diversity in the universe is to take the ultimate reality as a single whole of which diverse

* cf. above, Chapter I.

beings are merely interdependent and interrelated aspects. Thus, reality is one, in the strictest sense: its unity is prior to its diversity. A plurality of beings can be understood only as a diversity which falls within a single whole.

The above argument proves that reality must be one and that diverse elements must be included in a single substance as subordinate parts. But it does not establish the existence of any such diversity. How do we know, then, that reality is not absolutely simple and without parts? The answer is that the diversity is actually given: in our experience, a diversity and manifold appears, and "What appears is, and whatever is cannot fall outside the real."* The absolute reality must somehow include the whole detail of its appearances. Bradley denies that the experienced manifold is, as such, real, but he does not wish to reduce it to sheer nonentity. Whatever is, in any sense, must find its place within reality.

We know, then, that reality is one substance and that it includes a diversity. And thirdly, we know something about the way in which the absolute reality includes the diversity of appearance which falls within it. The Absolute must synthesise the diversity which it contains into a harmonious system. All inconsistency and incoherence must somehow be eliminated. Appearances, which at the level of appearance are in open conflict, must be reconciled and harmonised. How in detail the Absolute achieves this self-

* Appearance and Reality, p.140.

consistent synthesis of the manifold, Bradley does not pretend to show. But we know that reality must unmake the contradictions of what appears in thought, since reality must satisfy thought's criterion of self-consistency. We also know that the Absolute may remove these contradictions, since there are no differences which are, as such, contradictory. There is contradiction when one attempts to unite differences without a ground of union and distinction, but the contradiction will be resolved when the necessary ground is supplied. And what may be, if it also must be, certainly is.

Fourthly, we know the matter which fills out this abstract skeleton of a system which embraces a diversity of elements in a consistent unity. This matter is experience: the Absolute is an experience. It follows from what has already been said that the Absolute must include experience; for experience exists, and whatever exists must be included in reality. But Bradley requires a further argument in order to show that the Absolute Reality is nothing but experience. The essence of this argument is that we cannot significantly distinguish between being and experience. We find that anything which we can assert to have being consists in sentient experience. Thus, when we assert that the Absolute has being, we are asserting that the Absolute is experience, "for anything other than experience is meaningless."* To sum up these four characteristics of the Absolute, the ultimate reality

* Appearance and Reality, p.555.

is a single, all-inclusive, self-consistent whole of experience.

IV. If the only faculty of the mind were the power of abstract thought, then the only way to reach a reality beyond thought would be to follow the path indicated by Bradley. But in experience we find an element very different from mere abstract thought. There is an immediate experience of concrete reality which may be called "feeling" or "sensation", and one may suppose that we can reach a reality beyond thought because this reality is directly given in immediate experience. The limitations of discursive thought do not really require one to postulate an Absolute, such as Bradley describes.

It is reasonable to suggest that the existence of immediate experience makes possible the alternative solution to the problem of thought and reality which is required, as we have seen, if one wishes to maintain that our ordinary judgments may be intellectually satisfactory. We can think about the reality beyond thought which justifies thought's transitions, because this reality is directly given in experience. The problem of thought and reality is serious, only if one has falsely abstracted discursive thought from the concrete experience in which it is embedded. Thought can deal with what is not thought, because it is not an isolated and self-contained reality: it is merely an element in a comprehensive experience which includes other elements.

This is essentially the criticism which philosophers

like Bergson and William James make of what they call "intellectualism". They point out that a subject's experience contains another element besides abstract discursive thought—an element of feeling or sensation, which provides an immediate experience of reality. Now, Bradley, as we shall see, is by no means unaware of the importance of feeling or immediate nexperience. Why, then, does he refuse to accept James's contention that in immediate experience we are given the concrete reality to which we refer in abstract thought. This is the problem which we must now examine.

William James is perfectly prepared to agree with what Bradley says about the defects and limitations of thought. Thought is abstract and provides no access to the inner nature of concrete reality. And if thought sets itself up as absolute and unconditioned, it becomes involved in contradiction; for, as we have seen, it can supply no ground of union and distinction to justify its transitions from one element to another, so that the system of terms and relations which it employs is necessarily self-contradictory. According to James, thought has a merely subsidiary function in experience. We require to form abstract concepts in order to deal effectively with practical situations and in order to handle the masses of material given in immediate experience. Abstract thought cannot present bodily the concrete reality. It furnishes, as it were, a map of reality, which is useful for some purposes, but which cannot purport to <u>be</u> reality.

But the above defects of abstract thought, James argues, do not justify the assumption of the Absolute accepted by Bradley. We are not given reality in thought, but we are given reality in feeling or immediate experience. In immediate experience, we have a contact with reality, which is beyond the powers of abstract thought. And there is no need to appeal to an Absolute in order to provide the ground of union and distinction which is required to justify thought's transitions. For the necessary ground is directly given in feeling. In immediate experience, we find the concrete unity amid difference which thought cannot supply. Unlike some Empiricists, such as Hume, who believe that what is given in experience is a set of disconnected atomic presentations, James maintains that in immediate experience we are given the conjunctions as well as the disjunctions of the elements. We have a direct experience of terms in relation: this is an ultimate fact which must be recognised by the Radical Empiricist: a system of terms and relations is self-contradictory only when isolated in abstract thought, apart from the immediate experience in which it is given. Thus, there is no need to invoke a mysterious Absolute to resolve the contradictions inherent in isolated relational thought.*

But just as James is prepared to accept in general what Bradley has to say about thought, so Bradley would be prepared to accept in general what James has to say about feeling.

* Cf. Essays in Radical Empiricism.

There is a very remarkable similarity between the accounts of immediate experience offered by James and Bradley respectively, as is admitted on both sides.* In the first place, Bradley willingly concedes the main point on which James is insisting, that in immediate experience we are given concretely identity in difference, unity amid plurality. In feeling we are given neither a bare plurality nor a simple unity: we have presented a complex whole. "We cannot deny", Bradley writes, "that complex wholes are felt as single experiences."**

And when we consider Bradley's description of the other characteristics of feeling or immediate experience, we discover further evidence of the close parallel between the views of thinkers with so very different a temper as Bradley and William James. Bradley agrees with James that in feeling we are given a reality which is not given in thought. "It is only in feeling that I directly encounter reality."*+ Feeling has a certain reality which may be contrasted with the ideality of thought. In feeling, we have a direct access to reality: this is what is meant by the immediacy of feeling. In feeling, we are given what is individual--a "this"--whereas in thought we must be content with universals. Feeling is

* cf. Bradley, Essays on Truth and Reality, (Oxford, 1914) Chapter V, Appendix III, and James, "Bradley or Bergson?", The Journal of Philosophy, Vol. VII, No.2. Each philosopher expresses his surprise that the other should reach so different a conclusion on the basis of an almost identical account of experience. James attributes this to Bradley's anti-empiricism, Bradley to James's anti-rationalism.

** Appearance and Reality, p.521.

*+ ibid., p.526.

concrete: thought is abstract. Feeling has what William James would call "thickness", whereas thought is thin and dry. Bradley surely echoes James's sentiments when he writes, "When we turn from mere ideas to sensation, we experience in the "this" a revelation of freshness and life."*

Moreover, Bradley would agree that feeling is the fundamental factor in experience, and that conceptual processes are derivative and in comparison insubstantial. Feeling may be said to be fundamental in the sense of being a necessary first stage in the development of the psychical life. Bradley maintains that such a stage, "not only, with all of us, comes first in fact, but at times it recurs even in the life of the developed individual."** But even if the possibility of such a stage of pure feeling is denied, this will make little difference to Bradley's position; for there is a more important sense in which feeling is fundamental in experience. Feeling is the "immediate unity of a finite psychical centre",*+ and must therefore be the basis which grounds the experience of a finite subject, even when this experience transcends the mere immediacy of feeling. There is more to experience than feeling: there are ideal systems of terms and relations. But such systems necessarily depend on a background of feeling, which is therefore fundamental in experience. "At every

* Appearance and Reality, p.~~525~~.224.
** Essays on Truth and Reality, p.174.
*+ Appearance and Reality, p.454.

moment, my state, whatever else it is, is a whole of which I am immediately aware. It is an experienced non-relational unity of many in one. And object and subject and every possible relation and term, to be experienced at all, must fall within and depend vitally on such a felt unity."* That is, feeling does not disappear when the relational modes of experience supervene; it remains and "remaining it contains within itself every development which in a sense transcends it."**

Now, if Bradley is prepared to grant that in immediate experience we encounter the concrete reality and are given directly a unity in difference, why does he not agree with James that it is immediate experience which supplies the ground of union and distinction which abstract discursive thought cannot furnish from its own resources? Why does Bradley believe that feeling will not provide what is required and that we must invoke an Absolute beyond immediate experience? Certainly, the appeal to feeling will not repair the essential defect of discursive thought, in that the ground of union and distinction provided by immediate experience cannot be brought within thought to make thought's transitions both non-contradictory and unconditioned. Also, thought cannot reproduce the mode of union of the diversity given in feeling. If thought attempts to combine a manifold unconditionally according to the way of feeling, it will inevitably contradict itself.

* Essays on Truth and Reality, pp. 175-176.
** ibid., p.161.

But this does not prove that complex wholes, as given in feeling, are self-contradictory. And in pointing to the complex whole given in feeling (it may be urged) one does indicate the condition which governs the transitions of thought, and this is all that is necessary. A satisfactory ~~xm~~ philosophy is not required to transform abstract analytic thought into the concrete reality which it articulates. Thought cannot escape its dependent and derivative function: thought must be content with its station in the universe and must admit beyond itself as its condition an immediate experience which it may articulate, but which it can never encompass. Moreover, the Absolute assumed by Bradley is, in this respect, in exactly the same position as immediate experience. The Absolute can do no more than feeling to remove the essential limitations of thought. Like immediate experience, the Absolute must function as an unknown condition which governs and justifies thought's transitions. And if we refuse to accept the unity amid difference which is actually given in feeling, because it cannot be consistently represented in abstract thought, then for the very same reason, we must refuse to accept the unity amid difference which is assumed in the Absolute. The Absolute must retain on a larger scale all the supposed contradictions of immediate experience. But as William James puts it, "Intellectualism sees what it calls the guilt, when comminuted in the finite object: but it is too nearsighted to see it

in the more enormous object."*

But Bradley denies the ultimate reality of feeling, not because its mode of synthesis cannot be reproduced in thought without contradiction, nor because he believes that unity in difference is impossible in principle. For if Bradley did subscribe to such a principle, he could not grant a special dispensation in favour of the Absolute. The reason why Bradley will not admit that feeling, as such, is real is that feeling is finite--he maintains that nothing finite can be ultimately real. For the limited content or character of a finite being cannot be reconciled with the immediacy of its existence. This inconsistency is not to be attributed simply to the limitations of abstract thought: finite beings are not to be condemned, merely because in thought we cannot exhibit in detail the coherence of content and existence; for this is something which cannot be done even in the case of the Absolute, whose reality Bradley admits. We have positive knowledge that the content of a finite experience cannot be brought into harmony with its existence. A finite content is necessarily related to what lies beyond itself, and therefore, it must somehow pass beyond its own existence: in this self-transcendence it will pass beyond the limits of its own immediacy, thereby becoming inconsistent with the immediacy which a concrete reality must possess. This important part of Bradley's argument must be examined in detail.

* A Pluralistic Universe, p.297.

The content of immediate experience is finite and relative to what lies beyond itself. Bradley points out that the relativity and finitude of the content of immediate experience is shown, for instance, by the fact that the presented content is always in process of changing. "Mutability is a fact in the actual feeling which we experience."* A changing content of experience is by its very nature relative to what is not itself: it is of necessity relative to that from which it has changed and to that into which it is changing. And anything which is transient is surely finite.

But even if it is conceded that the content given in immediate experience is finite and relative to what lies beyond itself, how does this prove that the content does not cohere with its own existence? Why does Bradley hold that there is an incoherence ~~af~~ between content and existence, between the "what" and the "that" in the case of a finite being and not in the case of the Absolute? The answer is that Bradley conceives the Absolute as an entity which is completely self-contained, whose content does not stray beyond the limits of its existence. But finite beings, since they are related to beings beyond themselves, are not self-contained: a finite content must pass beyond the boundaries of its own existence. This would not be necessary, if it were possible for relations to be merely external; for in this case, the content of a finite being would keep within the limits of its own existence, and the relations

* Appearance and Reality, p.106.

of the being to other beings would be superficial and irrelevant to its character and internal nature. But Bradley, as we have seen, argues that merely external relations are impossible. The relations between finite beings must be internal: they must make a difference to the internal characters of the beings related. Now, if a relation to other beings is involved in the internal character of a finite being, this character or content must pass beyond its own existence, for it necessarily involved elements which lie beyond its own existence. This self-transcendence of the content of a finite being, Bradley calls the Ideality of the Finite.

This doctrine of the Ideality of the Finite explains and is confirmed by the existence of discursive thought. Discursive thought, for Bradley, is essentially judgment, and judgment, as Bradley defines it in the Principles of Logic, "is the act which refers an ideal content...to a reality beyond the act."* Now an ideal content may be referred beyond its own immediacy to an alien existence, because every idea has two sides: on the one side, it is a psychical existent, a psychological idea; on the other side, it is a meaning, a logical idea. It is as meanings or logical ideas that the contents of immediate experience are used in judgment. Now, the existence of judgment and the relational consciousness is no accident and no mystery. In virtue of its finitude, immediate experience is compelled to pass off into relational consciousness. The

* Book I, Chapter 1, Section 10.

development of the discursive intellect is due to the intrinsic ideality of the finite. In judgment, the content of feeling is divided from the immediacy of its existence and becomes ideal and universal. But this division is possible only because of the inherent instability of the union of content and existence given in feeling. This instability is due to the fact that the content of immediate experience necessarily transcends its own existence, because a finite psychical centre is internally related to what lies beyond itself.

And just as Bradley's account of immediate experience explains the emergence of discursive thought, so the existence of ~~th~~ discursive thought confirms Bradley's account of immediate experience. The fact that in judgment the content of feeling is sundered from its psychical existence and referred elsewhere is in itself good evidence that the immediate union of content and existence in feeling is not satisfactory. Also, the existence in the mind of an activity of judgment is an additional proof of the finitude of the self. We find that in judgment we refer ideal contents beyond the this-now-here of immediate feeling to an external reality. This means that the Solipsist is mistaken--that there is a reality beyond the psychical existence of the contents of our experience; and this external reality delimits the boundaries of the judging self, and establishes its finitude.

Although feeling, as such, is not real, it is nevertheless very important to take account of it; for feeling provides

a clue to the concrete nature of reality. In feeling or immediate experience we are given as a fact a complex whole, a diversity in unity, and this experience gives us, as it were, a sample of the concrete reality. In feeling, we "encounter" reality and become aware of a concrete immediacy to which abstract thought can never aspire. But we cannot rest satisfied with the immediate union of the one and the many which is given in feeling. The feeling of a finite psychical centre is not self-consistent--the content of the feeling is inconsistent with its existence--because the finite content has a certain ideality and transcends its own existence. This "ideality of the given finite" is responsible for the development of a discursive thought which goes beyond the immediate unity of feeling: but this discursive thought can never recapture the immediacy of feeling and the coherent unity of content and existence. This means that discursive thought does not satisfy its own criterion of reality, and it must be developed until it reaches its proper completion, even although this will mean the destruction of thought as such. We must develop thought until the consistent union of content and existence is restored, and we reach a higher form of immediacy which is an all-inclusive whole beyond thought. "We start from the diversity in unity which is given in feeling, and we develop this internally by the principle of self-completion beyond self, until we reach the idea of an all-inclusive and supra-relational experience."*

* Appearance and Reality, p.556.

V. If Bradley is right, we must admit that thought is never intellectually satisfactory, and we must abandon our attempt to construct a system of metaphysical pluralism; for Bradley denies the central assumption of the pluralist, that in the world there are many real substantial beings. Now, no direct and conclusive refutation of Bradley's view seems possible: we have not detected any major inconsistency in Bradley's system. Certainly, Bradley's theory, like all other philosophical theories, is not self-evidently true. The path to the Absolute, which he maps out, is in places very obscure: for example, his principle of self-completion beyond self is rather mysterious. But one cannot say definitely that this principle is false or that the path does not exist. We must therefore attempt to answer Bradley by providing an alternative account of experience and reality which admits the substantiality of the finite self, the plurality of real beings, and the general validity of thought. If such an alternative is possible, then Bradley, as we remarked at the beginning of the chapter, will be in a weak position. A theory which accepts the common sense belief in the reality of the self and the other things in the world must be preferred to one which does not, other things being equal.

The previous discussion has isolated the two basic reasons why Bradley will not admit the possibility of an alternative to his system. We have examined two objections to Bradleyx's position--the first, that Bradley is merely stating in a very

odd and misleading way the obvious truth that reality is more than thought: the second, that in immediate experience we are directly given a concrete reality which supplies the ground of union and distinction required to justify thought's transitions. The answers which Bradley would give to these objections pinpoint the crucial issues in the controversy. Against the first objection, Bradley would maintain that his doctrine that ~~thought~~ thought does not satisfy its own criterion explains how it is possible to assert in thought a reality beyond thought and is not merely affirming that thought is not everything. Against the second objection, Bradley would argue that what is given in immediate experience cannot be reality as such, because the finite content of the experience is essentially involved in internal relations to what lies beyond its own existence. Bradley believes that a system of metaphysical pluralism is impossible, because it cannot explain how one can think of a reality beyond thought, and because it cannot reconcile the interrelations of the many elements in the universe with their substantial reality. It is important to answer Bradley's arguments. For the fact that Bradley's system involves a radical modification of our common sense beliefs will not count against it, unless one can show that an alternative system which conforms to common sense is actually possible.

Bradley would claim that he maintains that thought is intellectually unsatisfactory, not because he is making the unreasonable demand that thought should conform to a standard

which is not proper to its own nature--the significance of his contention that thought has criteria which thought can never completely satisfy is that this is what makes it possible to talk meaningfully about a reality beyond thought. This means that an alternative theory which accepts the existence of a reality beyond thought must be able to show in its own way how a knowledge of such a reality is possible.

But if one is prepared to accept the straightforward and obvious solution to the problem of thought and reality, this is not a serious difficulty. We may say quite simply that we can think of a reality beyond thought, because, in fact, we are thinking of such a reality all the time, or nearly all the time. No special intellectual contortions are required in order to think of what is not thought. Thought is essentially thought about a reality beyond thought. We can distinguish between thought and reality because this is a distinction implicit in the very nature of thought. When we reflect on an act of thought, we can isolate the thinking of the subject and distinguish it from the object thought about. It is certainly impossible to think about something which is not, in some sense, an object of thought, but it is not impossible to think about something which is beyond the activity of thinking as such. If one makes a clear distinction between thought and its object, the main difficulty disappears.

This solution is not, of course, a complete explanation of how we can think about what lies beyond thought. It is

offered as a mere description of the actual nature and structure of thought and it does not purport to explain why the thinking of a conscious subject is as it is. But surely this is not a fatal weakness. One cannot explain how it is possible to think of an external reality, only because thought is a fundamental factor in experience, and its functions cannot be explained in other terms. Our inability to do more than describe the structure of thought does not make it necessary to accept the solution which Bradley offers to the problem of thought and reality. This question will be reconsidered in the next chapter, when we are discussing the related problem of how it is possible to indicate the individuality of the beings in the world, when one is compelled to use a language which is made up of universal terms.

But Bradley's most effective argument is the argument which depends on his doctrine that relations are internal to the terms they connect. Even if Bradley cannot prove that those who do not accept his system are not entitled to assert a reality beyond thought, he may be able to prove that the finite content given in immediate experience is not an ultimate reality. If all relations are internal to their terms, then the immediate experience of a finite psychical centre cannot be an independent and final reality. Indeed, any plurality of independent substances will be impossible. Members of a plurality must be related to one another, and the substantial independence of a being is not compatible with internal

relations to other elements.*

The doctrine that all real relations must be internal is probably the most crucial principle in Bradley's philosophy. On this principle depends Bradley's arguments against the reality of what is given in feeling and against the very imp possibility of a system of Metaphysical Pluralism. It is therefore essential to refute this doctrine, if an ~~intrnxnl~~ alternative to Monism is to be possible. Bradley's proof that all relations are internal is briefly this. Relations must be either internal to their terms, or external to their terms. Now, terms cannot be really related by a relation which is merely external.* Therefore, all relations must be internal. Now, the weakness in this argument is that there is a possibility which Bradley has neglected. Bradley has considered only symmetrical relations. The choice he offers is this: either A is internally related to B and B is internally related to A, or else A is externally related to B and B is externally related to A. But there is a third possibility. It may be that the concrete relations between substantial beings are asymmetrical. It may be that A is internally related to B although B is externally related to A. The relationx between A and B may be internal to B and external to A. If we assume that real relations between substances must be symmetrical, then certainly the substances will fall apart if the relations are external, and their independent substantiality will be

* cf. above, pp. 122-124.

destroyed if the relations are internal. But the suggestion that thex concrete relation between substances is an asymmetrical internal-external relation offers a way of escape.

And this is no mere logical possibility. For there is asymmetry in the universe: there is the passage of time. Is it not plausible, then, to suggest that the basic relation between substances, the fundamental structural relation in the universe, is an asymmetrical transtemporal relation of past being to present being? The past makes a difference to the present: this is proved by the fact of causal conditioning. But the present does not make a difference to the past, for the past is fixed and unalterable. Therefore, the relation between past and present is internal to the present but external to the past. It is possible to accord to every finite being its moment of substantial independence before its immediacy is destroyed by the lapse of time, when it survives only in so far as it is internally related to and included in the constitution of a being which now becomes present. In subsequent chapters, this suggestion will have to be explored in greater detail. For the time being, we shall maintain only that there is at least a possibility of constructing a system of Metaphysical Pluralism which is not open to Bradley's general objection and which may reconcile the interrelations and the independence of the many beings in the world.

There is one final point which should be mentioned before we conclude this disaussion of Bradley. We cannot

accept Bradley's account of feeling or immediate experience. Thought is, in some sense, an expression of immediate experience, and just as thought is thought about an object which is beyond the activity of thinking, so experience is essentially the experience of an object beyond the activity of experiencing. Bradley believes that immediate experience is a non-relational unity of many in one which is below the level of the distinction between subject and object. But we would argue that even immediate experience has a subject-object structure. In immediate experience, what we are given is the self experiencing the not-self. Certainly, the conscious recognition of the distinction between self and not-self may not occur until the psychical life has attained a high level of development; but this is because the conscious recognition of this distinction is only possible in the case of a developed subject, and not because a more primitive experience is simple and without a fundamental distinction between subject and object. Our basic epistemological doctrine is that the subject directly experiences external objects, and if this is true in the case of a developed experience, it seems probable that it is also true, even in the case of a very elementary experience.

CHAPTER FIVE.

THE UNIQUENESS OF BEINGS.

I. In the previous chapters, we have been concerned to answer certain objections to our fundamental assumption that there are many substantial beings in the world. In Chapter II and Chapter III, we dealt with epistemological arguments against the possibility of an immediate awareness of real beings beyond the experiencing subject and the contents presented to his consciousness. In Chapter IV, we made an examination of Bradley's position. Bradley admits that there is a reality beyond the experiencing subject, but denies that there are many substantial beings, maintaining that reality is a single substantial whole, and that the self and all other finite beings are no more than insubstantial parts or aspects of the Absolute Reality. We were unable to provide a conclusive refutation of Bradley's theory, but we noted that Bradley, since he denies the common sense belief in the substantiality of the self, is in a weak position, unless he can show that no adequate explanation of the universe can be given by a Metaphysical Pluralist. Now Bradley does argue very persuasively against the possibility of a plurality of substances, but we indicated ways in which his arguments might be overcome. A final answer to Bradley, however, cannot be given unless one can construct a system of Metaphysical Pluralism which provides

a plausible and coherent explanation of the universe and which succeeds in getting round the difficulties to which Bradley has called attention. We shall now take for granted our fundamental tenet that there are many substantial beings, and work out the consequences of this hypothesis. The hypothesis will tend to be confirmed if on this basis we can supply a satisfactory explanation of the universe, and it will be refuted if we come up against insuperable difficulties.

The metaphysical doctrine that there is a plurality of substantial beings has two main implications, both of which give rise to difficult problems. The first implication is that the members of the plurality have some sort of togetherness--they form some sort of unity: this point will be discussed in the next chapter. The second implication is that each member of the plurality is distinct from all the other members. In the present chapter, we shall investigate this second implication, and we shall try to discover what constitutes the distinctive peculiarity of each member of the plurality. Since a substantial being is different from every other substantial being, it is unique and unrepeatable. The problem is: "What is responsible for the uniqueness of a substantial being?" This problem is essentially the same as the medieval problem of the principium individuationis.

There are two ways in which we are accustomed to distinguish between different beings in the world. Beings may be distinguished because they differ in quality or because they

occupy different areas in the spatio-temporal extensive continuum. Two beings cannot be the same if they have different qualities; nor can they be the same if they exist in different places or at different times.

If, as many believe, substantial beings may endure through a lapse of time without the destruction of their identity, the above statement, of course, will have to be modified. If substances persist in this way, one and the same substance may exist at different times, may have different qualities at different times, and may exist in different places at different times. Therefore, we would not be entitled to say more than that two contemporary substances cannot be the same if they have different qualities or occupy different places. We shall argue in a later chapter that the substances in the world are ephemeral and do not persist through time, and that the element of permanence in the universe must be explained in another way. But for the purposes of the present discussion, it is immaterial whether or not this argument be accepted. We hope to show that the uniqueness of an ephemeral substance can be determined neither by its special quality nor by its position in space and time. And if this is so, a fortiori one will not be able to determine the uniqueness of an enduring substance by its quality or spatio-temporal position. For in order to determine in this way the uniqueness of an enduring substance, one would have to define as unique by a reference to quality or position each of its passing states (and this

would still leave unexplained the identity which unites the various states of the substance.)

II. Although beings must be different if they differ in quality or position, it does not follow from this that two beings which have the same quality or the same position in space and time are really one and the same being. It seems perfectly possible that two beings which possess exactly the same qualities are nevertheless numerically distinct. It may be difficult to find two peas exactly alike--the same size, the same shape, the same shade of green--but is it impossible? And if two different beings may be identical in quality, it cannot be their peculiar quality which determines their uniqueness.

But it is more plausible to maintain that the uniqueness of every distinct individual is defined by its particular position in the spatio-temporal extensive continuum. Every part of space and time is unique and is distinct from all other parts of space and time. And if we accept the principle that no two substances can occupy the same part of space at the same time, then every unique individual will be pinned down by referring to its unique position in space and time: the uniqueness of the individual will be determined by the uniqueness of its spatio-temporal position. Now, it is, of course, possible that the principle which excludes all other substances from the portion of space and time occupied by a given substance is

false.* And if it is false, the uniqueness of a being's position will not be sufficient to account for the uniqueness of the being, and it will not necessarily distinguish that being from all others. This objection, however, is far from convincing: it is very odd to claim that two different things may be in the same place at the same time. But it is not necessary to examine this point in detail, since there is another more cogent objection to the identification of the spatio-temporal continuum as the principle of individuation. Even if one concedes that there is a one-to-one correspondence between every unique substance and every unique position in space and time, one does not have to grant that the uniqueness of the beings in the world is to be explained in terms of their unique spatio-temporal positions. For it may be the case that the uniqueness of distinct spatio-temporal positions is to be explained in terms of the uniqueness of the substantial beings which occupy these positions.

At this point we must introduce the notion of metaphysical or ontological priority. One element in the universe can be explained in terms of another element, only if the second element is metaphysically prior to the first. The prior

* Whitehead, for instance, would argue that the principle depends on a misconception of the relations between substantial beings and space and time: it depends on what he calls the fallacy of simple location, the mistaken view that every real being is confined to one definite portion of the spatio-temporal continuum. Whitehead maintains, on the contrary, that "In a certain sense, everything is everywhere at all times." Science and the Modern World (Cambridge, 1928) p. 114.

cannot be explained in terms of the posterior: the posterior must be explained in terms of the prior. Thus, one will be able to use the spatio-temporal continuum as a principle of individuation with respect to the beings in the world, only if space and time as such are metaphysically prior to spatial and temporal beings. Therefore, the point to be investigated is this: "Are space and time metaphysicallly prior to spatial and temporal beings, or is it them other way round?"

But first, we must make a digression in order to clarify as far as possible this obscure and fundamental notion, "metaphysical priority". "Metaphysical" priority is to be distinguished from "temporal" priority. We say that one thing is prior to another if it precedes it in time. But this is clearly not the kind of priority which is in question here. One thing may be metaphysically prior to another, even if the two things do not stand in a temporal relationship of before and after.

It may be suggested that the proper definition of metaphysical priority is that A is metaphysically prior to B, if and only if B could not exist unless A exists, while A might exist without requiring the existence of B. Now this may perhaps state a sufficient condition of metaphysical priority: it may be that one element is metaphysically prior to another, if its existence is presupposed by and does not presuppose the existence of the other element. But we could not accept the above as a definition, since we could not agree

that the condition which it lays down is a necessary condition which must be satisfied by all instances of metaphysical priority. We wish to say that one element may be metaphysically prior to another, even if neither could exist without the other.

We have already referred to the connection between metaphysical priority and metaphysical explanation, namely that one element cannot be used to explain another element which is metaphysically prior to it. The task of the metaphysician is to explain the elements in the universe which are posterior in terms of the elements which are prior. For an element which is metaphysically prior to another element in some sense supplies the reason for its existence.

But although to exhibit the connection between metaphysical priority and metaphysical explanation does something to elucidate both notions, nevertheless the concept of metaphysical priority is still far from clear. The difficulty of explaining the notion of metaphysical priority is duex to the fact that this is a fundamental conception which cannot be defined in other terms. But it is possible to gain a clearer understanding of the notion if we relate it to the notion of substance. In Chapter I, we agreed with Aristotle's view that substance is primary being--being in the primary sense. Now, when we say that substance is primary being, what we mean is that substantial being is metaphysically prior to any other type of being. Thus, we can indicate the nature of metaphysical priority by saying that it is the kind of priority

which a substance has to derivative and secondary modes of being. This is not to claim that the priority of substance to other modes of being is the only case of metaphysical priority. It may be that metaphysical priority is a generic notion which includes "substantial" priority as one of its species. There may be other species of metaphysical priority: for instance, if in addition to the finite substances in the world there exists an infinite substance, it may be possible to say that this infinite substance is metaphysically prior to the finite beings in the world, without having to reduce these finite beings to mere attributes of the infinite substance. But we do a good deal to elucidate the nature of metaphysical priority by pointing to one clear instance, even if there may be other instances which are significantly different. We can now see that the problem of the One and the Many discussed in the first chapter, "Is reality one or many substances?", is for practical purposes* the same as the problem, "Is the unity of the universe metaphysically prior to its multiplicity, or is it the multiplicity which is prior to the unity?"

It is now clear why what seemed a plausible enough definition of metaphysical priority should not be accepted: the reason is that the metaphysical priority of substantial being will not conform to this definition. A substance is

* The two problems will not be precisely the same, if substantial priority is not the only kind of metaphysical priority. But if we can show, for instance, that the Many is metaphysically prior to the One, and if we make the additional assumption that either the Many or the One but not both must be substantial, then it will follow that the Many are substances and that the One is not.

prior to the internal diversity which it contains, and substances are prior to the aggregate which they compose. Yet a substance will not exist unless all its parts and aspects also exist, and the existence of a plurality of substances is impossible without the existence of the unity which they must form. One cannot say that the metaphysically prior must not presuppose what is posterior to it. A whole and its parts necessarily presuppose one another; yet we may legitimately say either that the whole is prior to its parts of that the parts are prior to the whole.

The notion of substance and the notion of metaphysical priority help to elucidate each other. We understand what is meant by substance when we say that it is the primary kind of being, the mode of being which is metaphysically prior to all other modes of being. And we understand what is meant by metaphysical priority when we say that it is the kind of priority possessed by substance with respect to other types of being. Of course, this kind of elucidation would be circular, if it was intended as an explanation of concepts which are in themselves completely incomprehensible. But to establish a connection between substance and metaphysical priority is of value because we have already a vague sense of the meaning of these conceptions, and their meaning is to some extent clarified when we exhibit their interconnection.

We must now return to the question whether or not space and time are metaphysically prior to spatial and temporal beings. This is a very difficult question to answer. The first

complication is that our natural common sense beliefs which are relevant to the problem are by no means consistent. On the one hand, we naturally suppose that spatio-temporal beings are prior in reality, since they seem solid and substantial whereas space and time as such are in comparison insubstantial and intangible entities. On the other hand, we often talk as if space and time were prior to the beings in space and time, as if the spatio-temporal continuum were a pre-existent reality in which various positions are already mapped out, positions which are gradually occupied by the spatio-temporal beings as they come into existence.

Our view of the matter is that it is the first of the two contradictory strains present in common sense thought which represents the essential truth. Throughout this work, we rely heavily on the common sense belief that there are in the world many substnntial beings, and we must therefore attempt to explain away any elements in common sense thought which are inconsistent with this belief.

When we attempt to describe the relationship between space and time and spatio-temporal beings, it is natural to say that these beings are <u>in</u> space and time. This leads one to suppose that the spatio-temporal continuum is a kind of container which is prior to the beings which it contains. Again, we tend to think of space as if it were a framework into which all spatial beings must be fitted and which determines the unique position of every being. Also, we

suppose that somehow future time already exists before it is occupied by temporal beings as they become present. When we think of the coming to be and the passing away of the things in the world, we imagine that the universe is moving steadily through a time which exists before it is traversed, just as in ordinary life a path must already exist before we can move along it. But although such a story has some superficial plausibility, we have no guarantee that it is an adequate description of the true state of affairs. We say that things are in space and move through time, but we are using metaphors which, although satisfactory enough for normal purposes, are misleading if we take them to furnish a clue to the real nature of the relationship between spatio-temporal beings and space and time.

Another important reason why one tends to suppose that space and time are prior to the things in the world is the recognition that a single spatio-temporal being is not prior to space and time as a whole. But it is unfair to take this fact to establish the priority of space and time. For the view which one ought to refute is that the entire multiplicity of the beings in the world is prior to the spatio-temporal extensive continuum which is constituted by their inter-relationships.

Thus, it is fairly safe to discount the suggestions in common sense thought that space and time are metaphysically prior to spatio-temporal beings. We must now consider

whether or not it is safe to rely on the contrary suggestion which may also be detected in common sense thought--that spatio-temporal beings are prior to space and time. We naturally tend to believe that the beings in space and time are substances, whereas space and time as such are not. Now, this natural belief is not, of course, beyond all question, but it is difficult to disregard our very fundamental conviction that we ourselves and the beings which exist with us in the world are substantial beings, and it is not very plausible to maintain that entities so very different from the beings in the world as are space and time are also substances. Now, if this natural belief is true, it would seem to follow that space and time cannot be metaphysically prior to the beings in space and time. In the xnx above examination of the concept of metaphysical priority, we noted that substantial being is prior to all other modes of being. Thus, it would seem that the uniqueness of the substances in the world cannot be explained in terms of their unique positions in a spatio-temporal continuum which is not a substantial being.

Unfortunately, the matter is not quite so simple as that. One may acknowledge that space and time are not substances--one may respect the feeling of uneasiness which we experience when we entertain the suggestion that space and time are independent substantial beings--and yet maintain that space and time are metaphysically prior to the substances in space and time. For it is always possible that space and time are secondary modes of being which depend, not on the substances in space and

time, but on some other substance. Now, we have admitted that one substance may perhaps be metaphysically prior to other substances, and if this substance on which space and time depend is prior to the substances in space and time, then the spatio-temporal continuum may derive from the substance which supports it, a certain priority to the elements which it contains. If one says, for instance, that space and time are properties of an infinite Deity who is metaphysically prior to the substances in the world which he has created, then one can say that the space-time continuum is prior to spatio-temporal substances without having to suppose that it is a substantial and self-existent reality.

There are two possible objections to this approach. In the first place, one may argue that this theory makes certain assumptions which we have no means of verifying. It is a more economical hypothesis to suppose that it is the finite substances in the world which support the existence of the spatio-temporal extensive continuum rather than to introduce in addition an infinite substance in order to perform this function. Secondly, it is by no means clear how precisely the priority of space and time to the beings in space and time is to be reconciled with the substantiality of these beings.

These objections, however, are certainly not conclusive, and all things considered, we cannot honestly claim that our view that spatio-temporal beings are metaphysically prior to space and time as such is any more than the most

plausible hypothesis. But before we can maintain even this much, there are certain very dangerous arguments which must be answered.

III. In addition to the suggestions already examined which are contained in our common sense thinking about the subject, there are formidable philosophical arguments to the effect that space and time are prior to spatial and temporal beings. It will be convenient to discuss these arguments as presented by Kant in the R Transcendental Aesthetic.* Kant, indeed, wishes to establish more than the priority of space and time: his primary aim is to show that the objects of experience are no more than appearances and that space and time are forms of sensibility which depend on the nature of the experiencing subject. But in the course of his exposition of the concepts of space and time, he indicates the main considerations which might lead one to believe that space and time are r prior to the things in space and time.

Kant divides his exposition of the concepts of space and time into two main parts. In the transcendental exposition of these concepts, he maintains that they are principles which alone can explain the possibility of other a priori synthetic knowledge. In the metaphysical exposition, he attempts to show by a direct examination of their nature that these concepts are given a priori.

* Critique of Pure Reason, A 23-36, B 37-55.

In the transcendental exposition of the concept of space, Kant begins from the premiss that in the science of geometry, we actually possess synthetic a priori knowledge. And he argues that such synthetic a priori knowledge of the properties of space is possible, if and only if the original representation of space is an a priori intuition. This knowledge, since it is synthetic, must be grounded in an intuition and not in a mere concept; and it cannot be derived from an empirical intuition, since it is a priori knowledge. Kant provides a similar argument in the case of the concept of time. Here, we have no science of geometry, but we do have some a priori synthetic knowledge of the nature of time, e.g. we know that time has only one dimension. And the existence of this synthetic a priori knowledge proves that the original representation of time is also an a priori intuition.

Two additional assumptions, however, are necessary, if one is to derive from Kant's transcendental exposition the conclusion that space and time are prior to the things in space and time. First, one must assume that the beings in space and time are not known a priori. Secondly, one must assume that an element which can be known by an a priori intuition must be prior in reality to an element which cannot. If these assumptions are granted, the conclusion will follow. If space and time are known a priori, and if the things in space and time are known only a posteriori, and if what is known a priori is prior in reality to what is known a posteriori,

then it follows that space and time are prior to spatio-temporal beings.

Now, the above argument could not be endorsed without misgivings by anyone who wished to maintain that space and time are objective realities prior to the real beings which they contain. For the conclusion reached by Kant himself in the transcendental exposition is that both space and time and spatial and temporal objects are what he calls "transcendentally ideal", and that space and time are merely a priori forms of sensible intuition. However, Kant's derivation of the transcendental ideality of space and time from the premiss that the original representations are a priori intuitions is not completely conclusive. What Kant says in this section does not prove the impossibility of an a priori rational intuition of the nature of a fully real space and time, although to assume such an intuition is certainly far from plausible, and in other places, Kant puts forward powerful objections against the reality of space and time, which we shall examine in due course.

But it makes no difference to our theory which of these two opposing positions is accepted. If either is correct, the view that there are real, substantial spatio-temporal beings which are prior to space and time as such will be refuted. We must therefore attack the underlying argument on which both positions depend.

The two additional assumptions, which, as we have seen, are strictly required in order to derive the priority of space

and time from Kant's transcendental exposition are not self-evidently true. It is not, indeed, easy to deny that what we know a priori must be prior in reality to what we can know only a posteriori. But the other assumption, that spatio-temporal objects are not known a priori is certainly questionable. Kant himself maintains in the Transcendental Analytic that we do have an a priori knowledge of the general nature of spatio-temporal objects--we know, for example, that they are governed by causal laws. Therefore, Kant has to rely on the metaphysical exposition to determine the relative priority of space and time and spatio-temporal beings. But if one maintains that the subject experiences real external substances which are things in themselves, one cannot very well adopt this line of attack. For it is extremely difficult, although perhaps not impossible, to justify an a priori knowledge of spatio-temporal beings which are things in themselves and not merely phenomenal objects. Therefore, the assumption which we must challenge is the premiss which is Kant's point of departure, that in mathematics we actually possess genuine synthetic a priori knowledge.

At first sight, Kant's position is plausible enough. Mathematical propositions do seem to be a priori: they seem to have a certain necessity which is not shared by propositions derived from ordinary experience. And mathematical propositions do seem to be synthetic and informative: they do not simply furnish an analysis of abstract concepts, but provide genuine information about the world in which we live. Nevertheless,

there is a way in which it is possible, while taking account of these considerations, to maintain that Kant is mistaken and that the nature of mathematical knowledge has been misrepresented by those who base it on a priori synthetic intuitions. One may argue that mathematical propositions seem to be both synthetic and a priori, only because of a certain fundamental ambiguity. Taken in one way, mathematical propositions are a priori; taken in another way, they are synthetic; but they are never unequivocally a priori synthetic. The distinction which must be recognised may be described as the distinction between "pure" and "applied" mathematics, or as the distinction between an abstract mathematical system and its empirical "interpretation".

The propositions in an abstract mathematical system are necessary and a priori. But the necessity has been introduced by the definitions of the mathematician: the meanings and relationships of the elements employed in the abstract system are laid down by definition. This means that the propositions in the system are not synthetic--they are necessary, only because they are analytic. Not all mathematical propositions, indeed, are analytic in the strict Kantian sense--the predicate is not always simply an unfolding of what is implicitly contained in the subject term. But "analytic" should be given a wider sense than Kant would allow; for one can hardly deny that a proposition in which two concepts of equal weight are interlocked in a specific way by definition is an analytic

a priori proposition.

Therefore, it is possible to construct, for example, an a priori geometrical system in which all propositions are rigidly deduced from certain necessary axioms. But these geomxetrical axioms will not be synthetic. Geometrical axioms are synthetic, only if they are taken, not as mere definitions within an abstract system, but as asserting a connection between elements in the real world. And we have no necessary guarantee that any particular geometrical system and the axioms which it contains can be truly applied to a space which is other than an abstract systematic construct--to the space which is given in experience. If we take a geometrical axiom to be synthetic, it is neither necessary nor a priori. It must be tested by a reference to the data of experience, and such a test will never establish that the axiom is true, necessarily and always. For example, experience may confirm the axiom that space has three and only three dimensions, but it will not prove that it is necessary that space have three dimensions or that space will always have three dimensions.

Recent developments in mathematics have tended to confirm the above account of mathematical knowledge. The distinction between an abstract mathematical system and its concrete "interpretation" was not so clear in the case of traditional mathematics, because the abstract systems devised had an obvious application to the world encountered in experience. But the distinction between an abstract system and its xxxxxxx

application is clearer, when systems are constructed which have no obvious application to the real world. It is possible to construct geometrical systems which describe spaces with four, five or any number of dimensions. Such systems do not differ in structure from the system which describes a space with only three dimensions. The only difference is that the three-dimensional system has an application to the actual world, whereas the other systems have not. But the applicability of Euclidean geometry is a contingent and empirical fact and not a necessary and a priori truth.

At this point, we must briefly consider an objection. It may be argued that there are certain basic mathematical principles to which the above account does not apply, even if there are some less fundamental principles which can be adequately explained in this way. One may admit that the axiom that space is three-dimensional is not a synthetic a priori truth and yet maintain that there are certain other axioms which are known to be true by an a priori intuition. For example, it is none too easy to prove that simple arithmetical propositions, such as 7+5=12, are not synthetic a priori truths. In order to defend the priority of spatio-temporal beings, it is strictly necessary to prove only that geometrical propositions are not synthetic a priori: nevertheless, we shall discuss this example briefly, because even in this extreme case, it is possible to dispute the Kantian view. And if arithmetical propositions are not synthetic a priori,

it is unlikely that any mathematical propositions are.

It is not at first sight plausible to make a distinction between "pure" arithmetic and "applied" arithmetic. There does not seem to be much difference, if any, between the abstract "1+1=2" and its concrete correlative "one thing plus another thing equals two things", because one supposes that arithmetical principles necessarily apply to the real world. It is reasonable to suggest that the applicability of a three-dimensional geometry to the actual world is a contingent fact, whereas it may not be thought reasonable to distinguish an abstract arithmetical system which might not apply to the concrete reality. But there is no fundamental difference between the two cases. Arithmetical principles will apply to the external reality, if and only if this reality contains definite units which may be enumerated, so that arithmetical principles as such are not synthetic a priori truths.

Propositions in an abstract arithmetical system, which is not applied to any real entities, are, indeed, a priori, but they are analytic, not synthetic. Kant is certainly right when he points out that in the case of the proposition, 7+5=12, the concept of twelve cannot be derived by an isolated analysis of the subject term. But it does not follow that the proposition is not analytic in the wider sense of being true by definition. One may suggest that arithmetical propositions are true in virtue of the definitions of the symbols employed and the axioms prescribed by the mathematician

to govern the arithmetical series which he has constructed.

The above discussion is much too brief to do full justice to the important topic of the nature of mathematical knowledge. But we may be permitted to claim that we have shown, at least, that it is not nedessary to admit that mathematical knowledge is synthetic a priori and that an alternative account is not unreasonable. To summarise the alternative theory, if one employs mathematical propositions to create a consistent abstract system, then these propositions are either axioms true by definition or else follow necessarily from axioms true by definition. The mathematical propositions are indeed necessary and a priori, but they are also analytic. If, on the other hand, one supposes that a mathematical proposition is making an assertion about the real world, then the proposition is synthetic, but it is not necessarily true, nor can it be known to be true a priori.

To suggest a plausible alternative to the Kantian view is not, of course, in itself enough to refute conclusively the theory that mathematical propositions are synthetic a priori. But this does show that an argument against the priority of spatio-temporal beings which depends on Kant's transcendental exposition of the concepts of space and time is not an insuperable objection. For it depends on a premiss which is certainly open to question--a premiss which, indeed, is disputed by the majority of contemporary philosophers of mathematics.

We must now examine the metaphysical exposition of the

concepts of space and time, which Kant divides into four parts. Kant's first point is that space and time are not empirical concepts derived from our experience of spatial and temporal objects. For an experience of spatial and temporal objects is possible only if representations of space and time are presupposed. But there is nothing in this argument which would compel one to admit that space and time are prior to spatio-temporal beings. One may agree that a representation of time is essentially involved in all experience and that a representation of space is involved in the experience of external things, but the priority of space and time does not follow, unless one can show that spatio-temporal objects are <u>nomt</u> essentially involved in the representations of space and time.

The second argument which Kant develops is more important and more dangerous, and it closes the gap which we noticed in the first argument. Kant's contention is that "we can never represent to ourselves the absence of space, though we can quite well think it as empty of objects"* and that "we cannot, in respect of appearances in general, remove time itself, though we can quite well think time as void of appearances."** We can think of an empty space and an empty time, but we cannot think of objects of a possible experience which are not in space and time. To be quite

* <u>ibid.</u>, A 24, B 38.
** <u>ibid.</u>, A 31, B 46.

accurate, Kant makes a distinction between space and time in this respect. He admits that there are objects of experience which are not in space, but he lays down that all appearances, all objects of a possible experience, must be in time. We shall restrict the discussion to the case of time. A similar argument is possible in the case of space, but it is more complicated on account of Kant's qualification that only the objects of outer experience must exist in space.

Now, if it is true that we can imagine time without having to assume temporal beings within it, whereas we cannot imagine possible objects of experience which do not exist in time, then it would seem that time as such must be prior to the temporal objects of experience. We shall grant Kant's assertion that we cannot think of possible objects of experience which are not subject to a temporal condition. But one can show that Kant's argument does not prove the priority of time to temporal beings, if one makes a careful distinction within the premiss that the conception of time does not require the assumption of temporal beings to occupy time.

When one says that one can think of an empty time, one may mean that one can suppose that time might have in some sense a real existence without having to suppose the real existence of a manifold of finite temporal beings; or else, one may mean simply that one can form an abstract conception of a scheme of temporal relationships which does not imply the existence of concrete temporal beings. Now, if one chooses the former

interpretation of this premiss, the priority of time to temporal beings will indeed follow, if the premiss be true. But if this interpretation is accepted, one may seriously question its truth. For can one think of time as really existing unless one assumes the existence of individual temporal beings to distinguish the various parts of time? Time is real, only if there is a real distinction between before and after, and there is a real distinction between before and after, only if there is one real being which comes before, and another which comes after.

On the other hand, if one is simply asserting that one can form an abstract conception of time which does not imply the real existence of temporal beings, the premiss is probably true, although one may still have to postulate abstract elements of some sort to serve as terms for the temporal relationships. But it does not follow that this empty time, abstractly conceived, is prior in reality to the concrete temporal individuals. We must admit that A is prior in reality to B, if A can exist without B whereas B cannot exist without A. But we cannot say that A is metaphysically prior to B, if the mere conception of A does not presuppose the conception of B, whereas the conception of B does presuppose the conception of A. To illustrate the point, the concept of a cube does involve the concept of a square, whereas the concept of a square does not involve the concept of a cube or any other solid object. But this does not prove that square surfaces

are prior in reality to solid objects which incorporate square surfaces. For although a cube cannot exist unless its square surfaces also exist, neither can a square exist in the real world in and by itself, but only as a surface of some solid object. And indeed, in the light of what was said previously about the nature of metaphysical priority, it is much more plausible to suggest that it is the solid or cube which is prior in reality, since it would seem that the solid is the complete substantial being, rather than the square surface, which is merely an element which may be abstracted from the solid in which it is included.

To apply the above principles to the case of time, time as such is not necessarily prior to temporal beings, even if it is possible to form the conception of an abstract system of time which does not involve the conception of temporal beings, whereas any conception of temporal beings does involve the conception of time. For although the existence of temporal beings presupposes the existence of time, the real existence of time also presupposes the existence of temporal beings. And just as a cube may be metaphysically prior to its square surfaces, so temporal beings may be metaphysically prior to time as such.

But it is the third and fourth sections of the metaphysical exposition which contain the most forceful argument in favour of the priority of space and time to spatial and temporal beings. Kant's main purpose in these sections is to prove that the

original representations of space and time are not concepts but pure intuitions. But in the course of his discussion, he maintains that the various determinate parts of space cannot be prior to the one all-embracing space in which they are included. Space as a whole cannot be constituted by its parts; for the parts presuppose the whole, since every determinate part of space is possible only through the delimitation of space as such. Moreover, space as a whole must be infinite: "Space is represented as an infinite given magnitude."* Think of any finite extension, no matter how large, and one finds that one is assuming a space beyond, within which the boundaries of the finite volume are determined. We cannot conceive of a finite space which is the totality of space, because we must at the same time assume a space beyond these finite limits. Now, if space is infinite, it can be neither derived from nor posterior to any finite being or any finite group of finite beings. In short, space as such is prior to finite spatial beings, since the spatial extension of any finite being presupposes a space beyond its own boundaries.

There is a corresponding argument in the case of time. "Every determinate magnitude of time is possible only through limitations of one single time that underlies it."** Any finite duration of time presupposes a further time within which its boundaries are determined. And we cannot think of a limit

* ibid., B 39.
** ibid., A 32 B 48.

to time as a whole without assuming the existence of a time on the other side of this limit. We cannot think of a beginning to time: We cannot suppose that the temporal series originated at a definite point in the past: for, in thinking of a beginning to time, we are covertly assuming, prior to the official beginning of time, a time within which the moment of origination is determined. Therefore, time as such is infinite and must be prior to any finite temporal being or any finite groups of temporal beings.

This is an argument which cannot be legitimately used by those who wish to maintain that space and time are objective realities which are metaphysically prior to the real spatio-temporal beings in the world. The reason why can be explained most convincingly in connection with the series of past time. Kant holds that every finite time presupposes a time beyond, within which its limits are determined. Now, if egery finite duration presupposes a time which precedes it, the series of past time which is formed by moving from a finite duration to its predecessor cannot be finite: it must be an infinite series. But this means that there is no real totality of past time. The series of past time can never be completed. We use the term "infinite" to refer to just that type of serial order where we can never reach a final totality, where the series can never be completed by successive operations. There are, indeed, mathematical techniques for dealing with the sum to infinity of certain series, but the existence of these techniques does not

prove the reality of a completed infinite series, any more than the existence of techniques for dealing with the square root of minus one proves that this entity is a real number.

But if time is real, the series of past time must be a completed infinite series. Unless the series of past time up to the present moment has actually been completed, time, so to speak, could never have got as far as the present moment. The existence of the present moment presupposes the existence, in some sense, of the totality of all prior moments in the temporal continuum. But it was shown above that the series of past time is an infinite series which can never be completed. The conclusion is that time and the temporal series cannot be real beings. Those who believe that space and time are perfectly real are confronted with a dilemma. Space and time must be either finite or infinite. Now, they cannot be real finite beings, since every finite space or time presupposes a further space or time. Nor can they be real infinite beings, for this would require the actual completion of an infinite series, which is impossible. It would seem that one is driven to accept Kant's solution, that space and time are merely forms of sensible intuition, contributed to the object of experience by the experiencing subject.*

* The above argument is very similar to the argument employed by Kant in the First Antinomy. (op. cit, A 426-433 B 454-461.) But the difference is that the above argument is developing the consequences of the supposition that space and time are real totalities, finite or infinite, whereas in the First Antinomy, Kant is drawing out the absurd implications of the hypothesis that the world is a real totality, finite or infinite as regards an infinite space and time.

It is, however, small consolation that this argument will demolish the position which we originally set ✱ out to challenge, since if it is valid, it will be equally fatal to the view which we ourselves wish to defend. Indeed, Kant's thesis that space and time and the beings in space and time are not objectively real things in themselves will damage our central position much more vitally than the view that space and time are objective realities metaphysically prior to the real spatio-temporal beings in the world. Therefore, if we wish to maintain that the spatio-temporal extensive continuum is an objective order which depends on the finite substances which we encounter in experience, then we must endeavour to answer Kant's very powerful arguments. But it is very difficult to find a flaw in Kant's argument or to suggest an alternative solution to the dilemma concerning the nature of space and time as a whole. This task we shall postpone until the next chapter when we shall be investigating the nature of space and time in more detail. We shall argue that the spatio-temporal order is finite with respect to the past and infinite with respect to the future. Although it is not easy to make this suggestion as convincing as one would desire, heroic measures may be justified in order to avoid denying the common sense belief in the reality of the spatio-temporal world.

To sum up this discussion, the attempt to use the spatio-temporal continuum to individuate and determine the uniqueness of the beings in the world must break down, unless one can

produce a good reason for doubting the intuition that the beings in the world are substances which are metaphysically prior to space and time as such. For one cannot explain what is prior in terms of an element which is posterior and dependent. We have successfully answered certain arguments which seemed to prove that space and time must be prior to the beings in space and time. And the argument which has as yet been left unanswered cannot be used to prove that space and time may determine the uniqueness of every real spatio-temporal being. For although this argument maintains the priority of space and time, it also implies that neither space and time as such nor the beings in space and time are fully real. Space and time, Kant holds, are transcendentally ideal, being forms of intuition imposed by the experiencing subject. However, this argument constitutes a very formidable and fundamental objection to our entire position, and it must be examined carefully in the following chapter.

IV. We must therefore reconsider the other suggestion which was made at the beginning of the present chapter, that the uniqueness of the beings in the world is determined by their specific character or quality. We find within a being an element which is indicated by any of the terms "definiteness", "whatness", "essence", "character","quality", "nature" and so on. Now, if the definiteness of a being is, as some believe, an individual essence, it will obviously be logically adequate

to distinguish the being in question from all other beings. But if the definiteness of a being is a specific universal character which, in principle, may have many instantiations, it would seem that the different beings in the world will not necessarily be distinguished by their specific definitenesses. However, the view that the uniqueness of each being is determined by its specific universal character is more plausible than it appears at first sight, and a detailed examination is required.

At first sight, it seems that, although different beings very often differ in universal character, it is not possible to use the specific universal character of a being to distinguish it from all other beings or as a metaphysical principle of individuation. Every concrete being in the world is unique and unrepeatable, whereas a universal is by definition repeatable and its own specific nature will only distinguish it from all other universals. A universal is an entity which is capable of an indefinite number of instantiations. How, then, can universals be used to indicate the distinct uniqueness of concrete beings, since a universal, by its very definition, cannot be used to discriminate among the many instantiations of which it is capable?

But although one cannot deny that a universal character, no matter how complex, is in principle capable of an indefinite number of instantiations, nevertheless, one may argue that the system of the universe is such that it prohibits in fact the duplication of the total specific universal character of any

being. If this is so, the complex universal which constitutes the total definiteness or "whatness" of a being will be sufficient to distinguish it from all other beings and to determine it as absolutely unique. Any partial element in the character of a being may be repeated elsewhere and at other times, but the total character of the being will never be and can never be repeated.

We were prepared to concede that the spatio-temporal extensive continuum is logically adequate to distinguish a being from all the other beings in the world: our objection was that this continuum could not be used to determine the uniqueness of these beings, since it was posterior and not prior to them. But we shall endeavour to prove that, notwithstanding certain ingenious arguments to the contrary, the specific universal character of an individual is not even logically adequate to distinguish it from all other possible individual beings.

If one wishes to use the specific universal characters of beings as the principle of individuation, one must prove that the nature of the universe is such as to prevent the repetition, by another being, of precisely the same universal quality as characterises a being already in existence. But how is this possible? It is clearly illegitimate to invoke some Principle of the Identity of Indiscernibles which would state dogmatically that two beings which are indistinguishable with respect to their total universal character must be one and the same being. To use such a principle would be to beg the point at issue.

For it has been assumed that identity in total universal character is equivalent to identity in all respects, and it has not been shown that two beings which share the same universal character may not differ in some other way, e.g. numerically.

Now, if one restricts the total universal character of a being to what one may call its qualitative characteristics, it is very implausible to suppose that the specific character of one being could never be repeated by another being. But if one also includes in the total character of a being its specific relations, direct and indirect, to other beings, the plausibility of this view is very significantly increased. If the total character of a being involves specific universal relations to ± other beings, each of which has its own total character involving specific universal relations to other beings, each of which has its own total character etc., then the character of a single being involves, directly and indirectly, an almost infinite complexity, and the repetition of the character of one being would seem to require the duplication of the entire universe with which that being is connected.

If one also maintains that space and time are constituted by the spatial and temporal relations of one being to another, one may claim that one is according due recognition to the common sense belief in the individuating power of the spatio-temporal extensive continuum, without having to suppose that the orders of space and time are objective and independent

existents. For these spatial and temporal relations to other beings will form an important part of the total universal character which determines the uniqueness of a being; and in certain instances, one will have to appeal to the specific spatial and temporal relations of a being in order to distinguish it from another being with which it is identical in other respects.

But even if we do include in the total universal character of a being its spatial and temporal relations to other beings, is this enough to define that being as absolutely unique? The reproduction of the character of any given being would indeed require the reproduction of the entire spatio-temporal world in which the given being is implicated, but is this impossible? It is certainly not very likely that the whole universe to which the being is related has somewhere or other an exact duplicate, but if we can even conceive the possibility of such a state of affairs, this will prove that the total character of a being is not logically adequate to individuate it. A feature which we take to be responsible for the unique individuality of any being must be such that it is completely impossible for the same feature to be shared by another being. A genuine principle of individuation must be a distinguishing mark which will <u>always</u> allow us to differentiate between different beings. One must show that there is not even the possibility of a case arising where the supposed principle of individuation will be unable to allow a distinction

between beings which are really distinct.

But one can argue very cogently that the duplication of the universe with which a given being is connected is absolutely impossible, that the total specific universal character of a being does not simply include relations to other beings--it must include specific relations, direct or indirect, to all other beings without exception. For we cannot even conceive the possibility of two universes or two beings which are completely unconnected. As we have already seen*, a plurality of unrelated reals is impossible. If there are many real beings, these many beings must form a single plurality, and the members of this plurality must be interconnected in some way. Therefore, the universe in which a given being is implicated must be absolutely unique. If we postulate the existence of a group of beings which we suppose to duplicate the given universe, this group of beings must somehow be related to the original universe and must therefore be included in its unity. If there is to be any duplication of the total character of a being, this must take place within the one actual universe.

But the attempt to use the total universal character of a being to determine its uniqueness breaks down because we can in fact conceive of a case where two beings are identical in total character, although they are related to one another and are both included in one and the same universe. Let us imagine a world in which there are two groups of beings,

* cf. above, pp.2-3.

B' and B", which are related by the relation r, and which have the same internal character B. Now B' and B" have the same internal character B and the same relational character rB, so that, although distinct, they are identical in total character and every member of the first group has an exact counterpart in the second group.

We have been assuming that the relation between B' and B" is a symmetrical relation, that is, that the relation of B' to B" is the same as the relation of B" to B'. But if the relation between the two groups were asymmetrical , if the relation, when directed from B" to B' were different from what it is when directed from B' to B", the situation would be quite different. If the relation was pq, B' would have the relational characteristic pqB, whereas B" would have the relational characteristic qpB. B' and B" would be distinct in total character. Therefore, if one could prove that the specific relations of a given being to all other beings must be asymmetrical, then the situation described above would not be a real possibility.

There is certainly evidence that asymmetrical relations are very important in the universe. The temporal relations between beings are very fundamental, and temporal relations are obviously asymmetrical. If A is in the past of B and B is in future of A, the relations of A to B is clearly not the same as the relation of B to A. Temporal relations have a direction and the relation of past to future is the opposite of the relation of future to past. But can one claim that

all relations between real beings are necessarily asymmetrical? In a later chapter, we shall argue that all direct relations between beings in the world are and must be asymmetrical trans-temporal relations. But even if this is granted, it will not be sufficient, since not all beings are directly related. And it does not follow from the fact that all direct relations are asymmetrical that all indirect relations are likewise asymmetrical. The indirect relation between A and B will be symmetrical if these two beings are linked by a third being C to which both A and B have the same asymmetrical relation pq. The relation of A to B will be the same as the relation of B to A, namely, pqCqp.

But in any case, even if one could establish the truth of the principle that the total character of a being must include specific asymmetrical relations to all other beings, this still would not prove that the beings in the world can be individuated by means of their total characters. Professor Ayer* describes a world in which there would be an infinite number of beings with the same total character, even although the above principle was strictly obeyed. Ayer's suggestion is that history may be cyclical, the whole process being without any definite and uniquely characterised beginning or end. If this were so, then every cycle, although asymmetrically related to the infinite number of other cycles stretching before and after, would be identical in total character with every other cycle, and each

* cf. The Problem of Knowledge (London, 1956) pp. 185-186.

being within a cycle would have an infinite number of exact counterparts. This is indeed, as Ayer admits, a fanciful suggestion, but the very fact that this suggestion can be significantly made proves that it is not impossible for beings to differ, although identical in total character. There is an irreducible difference between the uniqueness of a being and the specific nature of its total character.

Moreover, a genuine principle of individuation, as we have seen, must not only be logically adequate to distinguish every being from every other being, it must also be metaphysically prior to the beings which it individuates. We have seen that the specific universal characteristics of beings cannot even meet the first of these two requirements. Let us now consider briefly whether or not they can meet the second. Are universals metaphysically prior to the beings which they characterise? It is very difficult to maintain that they are. In the first place, universal characters or properties would seem to be merely derivative aspects of the substantial beings which they qualify. Our sense of the priority of a substance to its universal characters is evidenced by the very metaphors which we naturally employ to describe the situation. We talk, for instance, about a substance "possessing" certain qualities. And in the second place, if we suppose that universals are metaphysically prior to the substances in the world, we shall have to postulate, with Plato, the independent existence of a realm of universals, and it is not easy to justify such

a postulate or to reconcile this realm with the realm of individual substances.

Thus, the uniqueness of an individual being can be determined neither by its position in a spatio-temporal extensive continuum, nor by the group of universal characters which it instantiates. But this is a negative result, and we have not yet shown what the principle of individuation is. We have seen that an indispensable prerequisite of a principle of individuation is that it should be metaphysically prior to the beings whose unique individuality it purports to explain. Now, the beings in the world are substances, and substantial being is metaphysically prior to all other modes of being. This means that any principle of individuation with respect to the beings in the world must itself be a substance. It is not impossible that there exists a transcendent substance which is metaphysically prior to the finite substances in the world and which is their principle of individuation. For example, if there is a God, who has created the universe of finite beings, it is reasonable to suggest that the principle of individuation is to be found in the nature of God. But a discussion of this suggestion is beyond the scope of the present enquiry into the structure of the world.

If one is unwilling to postulate the existence of a transcendent God, then one must admit that, strictly speaking, there is no such thing as a principle of individuation. The unique individuality of the beings in the world is an ultimate

which cannot be explained in terms of an external principle. But even if one maintains that it is the individual being itself which is responsible for its uniqueness, there are still questions which may be asked--questions which may or may not turn out to be meaningful. Are there such things as individual essences--defining characters which, unlike the universal characters discussed above, are in principle and by their very nature confined to the substances which they define? And is the distinctness of each and every substance to be attributed m to its individual essence or to its unique existence? But these are questions which we cannot attempt to answer in the present work.

V. Before leaving the topic of the uniqueness of beings, there is one further important problem which must be discussed. We wish to maintain the unique individuality of all the substantial beings in the world. But how is it possible to formulate a significant proposition which will succeed in expressing what we want to say? If we assert that every substance is unique, are we not, in effect, ascribing to all substances a universal characteristic, namely "uniqueness"? But how can one use a universal characteristic to express the fact that every substance is unique? To say that a being is unique is to mean that it is distinct from all other beings; but we have just seen that universals cannot be used to distinguish one being from all others. Indeed, since the

universal characteristic "uniqueness" is to be attributed to every substance, it cannot be used to distinguish one substance from any other substance. Striving to express the unique peculiarity of each substance, we have actually gone to the opposite extreme and have predicated a character common to all substances.

But this problem seems insoluble only so long as we neglect the fact that the universal character "uniqueness" is not the only element involved in the assertion "Every substance is unique". There are perhaps some propositions which are confined to explaining the relations between universals, e.g. "Blue is a colour". But there are other propositions, propositions concerning matters of fact and existence, which involve more than mere universals. Such propositions essentially involve a reference to concrete, individual beings. Take, for example, the proposition, "This cup is blue". It would seem that we are here predicating a universal characteristic, "blueness" of a concrete individual subject. This kind of proposition essentially implicates the individual being or group of individual beings to which the universal predicate is attributed. And in every proposition about the world, there is an implicit recognition of the particular existence of the subject.* Therefore, it is possible to understand the distinct uniqueness of every being, since in any matter of fact proposition one refers, and in some sense knows that one is

* See note at the end of the chapter.

referring, to a unique individual subject. Now, in the case of ordinary practical and scientific propositions concerning the nature of the world, it is the specific universal characters, ascribed to the individual subjects, which engage our attention. What is important for us is not the uniqueness of the being on the other side of the street, but the fact that it is a cat and not a tiger. What interests us is not that there is an individual being lying in our path, but that the being in question is air, which we can easily displace, rather than a lamp post, which we cannot. The individual uniqueness of the subject of any proposition about the nature of the real world is a constant and invariant factor, and as such does not normally occupy the focus of one's attention. But there is nothing to prevent a philosopher from making explicit the uniqueness of the subjects of matter of fact propositions, if he so desires. This can be done by using a proposition like "Every substance is unique". Here, the predicate explicitly directs one's attention to the uniqueness of the subject.

But this is not a complete solution to the problem. For how can one use a universal predicate "uniqueness" to direct one's attention to the unique being of a substance? And it is not easy to deny that "uniqueness" <u>is</u> a universal, common to all beings, which we ascribe to individual beings when we assert that they are unique. In order to solve this problem, it will be helpful to consider a parallel case--the case of existence. "Existence", too, would seem to be a

universal characteristic which we ascribe to beings when we assert that they exist. Philosophers have often been puzzled by the problem in connection with existence, although they have tended to neglect the corresponding problem in connection with uniqueness.*

The problem is: "How can one express the real existence of a being by ascribing to it the universal characteristic 'existence'?" It is tempting to answer this problem by simply denying that "existence" is a universal--"Existence is not a predicate". Those who believe that there is a universal characteristic "existence", it may be alleged, have misunderstood the logical function of the verb "to exist". When one says, for example, that ghosts exist, or do not exist, one is not saying that ghosts possess, or do not possess, the universal character "existence". Now, it must be admitted that the verb "to exist" is not always used to assert the possession of a certain universal characteristic. What settles the matter is the paradox in which one becomes involved if one attempts to interpret in this way the proposition that something or other does not exist. One must assume the existence of anything to which one attributes or refuses a certain character, and if one denies that a thing possesses the character "existence", one is at once asserting and denying the existence of that thing. But this does not prove that the verb "to exist"

* Bradley, however, is well aware of the difficulty when he distinguishes between the "this" and "thisness". Cf. Appearance and Reality, p.175.

can never be used to ascribe to a being the universal characteristic "existence". There is nox reason why "to exist" should not have two distinct functions. Although it is absurd to refuse the character "existence" to a given being, it is not necessarily absurd to ascribe the character "existence" to a being. The absurdity in the first case is due, not to the illegitimate use of"existence" as a characteristic, but to the contradiction which has been introduced. Thus, a metaphysician may say, "Substances exist" and mean more than "There are substances". The sentence "Substances exist" may be used to assert that different substances all have this in common, that they exist, and how can we understand this identity in difference except as a universal characteristic? There must be a universal "existence" since existence is an element shared by all real things.

There is another possible objection to the view that there is a universal character, "existence". One may legitimately combine a universal with any other universal, so long as the Law of Contradiction is not transgressed. For example, one may combine together the group of universal characters which define a unicorn. Now, if "existence" is a universal, "existence" may be legitimately added to this group, since the existence of unicorns does not involve a contradiction. It would seem to follow that unicorns exist, and this is false. Therefore, "existence" cannot be a universal.

But this objection can be answered. The real existence

of unicorns does not follow from the fact that the universal characters which define a unicorn may be combined with the universal "existence". To combine into a complex universal the characters "unicorn-ness" and "existence" is by no means the same thing as to assert the real existence of a unicorn. To assert the real existence of anything is to make a judgment, and in making a judgment about the world, we do not simply combine universal characteristics. This, indeed, is generally recognised, but it is not usually so clearly recognised that the principle will hold good, even if one universal characteristic is the universal "existence".

But a further difficulty immediately presents itself. We have seen that if "existence" is a universal concept, it may be combined with other universal concepts, the concept of a unicorn, for example. But what is added to the concept of a unicorn, when one adds the concept of existence? The concept of an existent unicorn does not seem to be significantly different from the bare concept of a unicorn. The concept of an existent hundred thalers* would seem to contain no added determination over and above the bare concept of a hundred thalers. And since we are maintaining that the mere concept of an existent hundred thalers is radically different from the assertion that the hundred thalers really exist, it would seem that this added concept of existence is meaningless and without any function. The solution to this difficulty is perhaps

* cf. Kant, Critique of Pure Reason, A 598-600, B 626-628.

to say that the reason why the concept of an existent unicorn does not differ from the concept of a unicorn is that the concept of a unicorn already implies the concept of existence in the same way as the concept of blue implies the concept of colour. Whenever we form a valid concept, i.e. a concept which obeys the Law of Contradiction, we suppose that the object conceived is possible. That is, we conceive it as a possible existent and necessarily include in our concept the concept of existence. The qualification expressed by the term "possible" refers to the fact that we have not determined whether or not to assert the real existence of the object conceived.

Finally, it is worth noting that the assumption of a universal concept "existence" does not preclude one from subscribing in general to the Kantian answer to the ontological argument. Even if the concept of the ens realissimum is taken to include necessarily the concept of existence, this will not entitle one to posit the real existence of such a being as an object which is something more than a mere concept. Moreover, if the argument of the previous paragraph is correct, it will provide another conclusive objection to the ontological argument. If every self-consistent concept necessarily implies the concept of existence, the concept of the ens realissimum will not be in a special position.

To return to the original problem, it seems that we can refer to that element in the constitution of a being which is

its existence, only by making use of a universal characteristic. There is a characteristic "existence" which may be legitimately attributed to every being which exists. But it is clear that the real existence of a being is no mere universal characteristic. The solution to the problem is perhaps to maintain that there is a universal characteristic or meaning "existence" which may be used to refer one to its instantiations, the existence of particular facts. But an instantiation of the universal "existence" is a very different thing from the universal "existence" as such. One might say that a universal like "redness" is essentially unchanged when it is instantiated, when it acquires a real existence as opposed to its conceptual existence as an object of thought. This may not be the correct account of the situation ,even in the case of universals like "redness". And it is certainly not the correct account in the case of the universal "existence". To exist is indeed to possess a certain abstract universal characteristic "existence". But concrete existence is very much more than the possession of such a universal character. That is, the relation between an existing fact and the universal "existence" which it instantiates is not adequately described by saying that the fact "possesses"the universal, i.e. incorporates it unchanged in its constitution. The metaphor is misleading. And it is not a fatal objection that one cannot provide an alternative positive description of this relation of instantiation. For one may argue that the relation of instantiation

is a quite fundamental relationship which cannot be described in other terms. Thus, one may use the universal concept "existence" m to refer to the real existence of beings, since a universal may be used to f refer one to its instantiations, and the instantiations of the universal "existence" are very different from the universal itself.

A similar solution can be given to the similar problem in connection with uniqueness. When we say that every substance is unique, we are using a completely generic universal "uniqueness" to refer to the unique being of each substance. Now, this is possible, because a universal may be used to refer to its instantiations, and the instantiations of the universal "uniqueness" are not themselves universals, but unique facts. The element in a being which we must call its uniqueness is not simply a universal character which the being "possesses". Just as to exist is more than to possess the character "existence", so to be unique is more than to possess the character "uniqueness".

The above discussion is very relevant to a problem which was considered in the previous chapter--the problem of thought and reality. The problem raised by Bradley is in essence, "How can one think of a reality which is other than thought? How can thought transcend itself in order to provide one with some knowledge and understanding of what is not thought?" In a sense, we can add little to the solution which we suggested before--one can think of a reality beyond thought, because

thought by its very nature involves a reference to a reality beyond the process of thinking in its subjective aspect. And if one makes ~~further~~ further inquiries as to the nature of this reference, if one asks for an explanation of the meaning of the preposition "about" which we use when we say that thought is essentially about a reality distinct from thought, there is little to say in reply. One might, perhaps, discover more appropriate terms to describe the structure of thought as we know it, but it is not likely that one will ever be able to explain why thought has the nature and structure which it seems to have. We must accept as an ultimate and fundamental fact that thought is an activity which has its own nature and its own laws, and we must not suspect a paradox because thought cannot be assimilated to other activities which do not have the same self-transcendence or because the nature of thought cannot be explained in other terms.

But the two problems discussed above do throw light on the problem of thought and reality, since they are, in effect, specifications of this very problem. The reality beyond thought, we suppose, has a real existence and is unique. In order to think about these aspects of reality, we must use the universal concepts "existence" and "uniqueness". Thus, we see that in fact we are dealing with specific aspects of the problem of thought and reality when we ask, "How is it possible to use the universal concepts "existence" and "uniqueness" to refer to a real existence and a unique being?" The solutions

suggested to these two problems follow much the same pattern as the solution to the original problem of thought and reality--we simply asserted that it is inherent in the very nature of a universal that it can be used to refer to its instantiations, which are not themselves universals. In the last analysis, we can no more explain how a universal can refer to or can be instantiated by entities which are not universals, than we could explain how it is possible to think about a reality beyond thought. But to exhibit the interconnection of these three problems and to show that a similar solution can be given in each case does seem to increase the plausibility of the whole account.

NOTE. We do not wish to maintain that all matter of fact propositions have exactly the same logical structure as "This cup is blue." When we make an assertion about the world, we are not always attributing a universal predicate to an individual subject. Sometimes, both subject and predicate involve a reference to unique individual beings, e.g. the proposition,"This animal is a lion." This proposition may, of course, be reframed so that it conforms to the logical structure of "This cup is blue", becoming "This animal is leonine." Now, for certain purposes, this odd translation is equivalent to the proposition which it translates, but the two propositions are, nevertheless, not exactly the same. Both subject and predicate of the proposition, "This animal

is a lion" refer to an individual being, whereas in the case of the supposed translation, the predicate is a universal and only the subject refers to a concrete individual. It is perhaps easier to bring out the uniqueness of individuals, if one uses a proposition with the structure of "This animal is a lion", where both subject and predicate refer directly to unique beings and not to universals, e.g. "All substantial beings are unique individuals." (We could not, of course, accept the interpretation of this proposition which would be offered by many symbolic logicians, who would take it as merely asserting a connection between universals and making no existential commitment. See the discussion of the distinction between the two meanings of "all"--"all" referring to an actual totality of existents and "all" referring to a universal meaning--in Paul Weiss: Modes of Being, 3.27.)

CHAPTER SIX.

THE TOGETHERNESS OF BEINGS.

The fundamental assumption of this thesis, that there are in the world many substantial beings, has two main implications. In the previous chapter, we discussed the implication that every substantial being is unique and distinct from all other beings. In the present chapter, we shall deal with the other implication, that the many substantial beings in the world are interrelated and form some sort of unity---they are together in the same universe. The elements in a many must be related; for a plurality of completely unrelated reals is impossible. One cannot think of a plurality without at the same time thinking of the unity of the plurality.

Thus, the various substantial beings in the world are all interrelated in some way, and this gives rise to a very serious problem. How is the interrelatedness of beings to be reconciled with their substantial independence? In the first chapter, we pointed out that substances are independent and self-existent beings, which provide the reason for their own existence in a way in which thexr properties of substances do not---properties are to be explained by a reference to the substantial being in which they are included and which is metaphysically prior to them. Of course, this self-existence and independence of substances must not be interpreted in too

stringent a way. When we say that a substance provides the reason for its own existence, we do not wish to deny the reality of causal conditioning. We do not deny that there is a mode of explanation according to which the coming to be of a substance of a certain specific type is to be explained by a reference to the characters of other substances in its environment. Also, the measure of independence possessed by a substance does not necessarily rule out the possibility that the substance has been created by and in some sense depends upon an infinite transcendent Being. The substances in the world may be indebted to their Creator for the gift of existence, but when they are given existence, they are given at the same time substantial independence. That is, the self-existence and independence of substances should be taken to mean no more than this--that, whatever their origin and whatever forces have combined to produce them, substances, once they have come to be, are ultimate drops or units of existence, which, since they transcend all other beings, can depend, in the fullest sense of the term, on nothing but themselves.

But even when one has made these qualifications, is it possible for a substantial being to be related to beings beyond itself? Do not the interrelationships of the beings in the world compel the drops of existence to coalesce into the ocean of being, which is alone an ultimate unit? This is a problem which we have already encountered in Chapter IV.* It is the

* cf. above, pp. 122-124, 141-143.

source of what is perhaps Bradley's most powerful argument against the possibility of a plurality of ultimate substantial beings.

Bradley's attack on metaphysical pluralism has, in fact, two distinct levels, although these two levels are not clearly distinguished by Bradley himself. His fundamental argument derives directly from his central thesis that discursive thought can never attain to the absolute and unconditioned truth which alone will satisfy the intellect. To construct a system of metaphysical pluralism and to assert the reality of many beings, one obviously requires discursive thought--one requires the type of thought which may legitimately move from the assertion of A to the assertion of B to the assertion of C and so on. But according to Bradley, no system of discursive thought can possibly be true: a fortiori, no system of metaphysical pluralism can be true. We have explained why we believe that Bradley's criterion of what will satisfy the intellect is too exacting. Thought does not aspire to an unconditioned truth; for thought and truth make an essential reference to a reality beyond thought, and the truth of an assertion is necessarily conditioned by the external reality whose nature it purports to articulate.* And we argued that Bradley cannot sustain his objection that it is only possible for us to transcend thought and think of a reality beyond thought by recognising

* above, pp.116-118.

that thought, as we have it, is not intellectually satisfactory.*

But even if Bradley's wholesale condemnation of discursive thought is shown to be indefensible, Bradley may advance at a different level an independent argument against metaphysical pluralism. Bradley himself does not doubt the truth of his fundamental doctrine, and when discussing relations between beings, he brings in considerations which cannot be legitimately introduced if this doctrine is false. But even when these considerations are excluded, there remains a very strong argument against the view that there are many interrelated substantial beings. The details of this argument were examined in Chapter IV,** and only a brief summary is now required.

The argument is that there cannot be real relations between independent substances, no matter whether these relations are supposed to be internal or external to their terms. The relations between beings cannot be merely external, i.e. relations which make no difference to the terms they relate. If the relation between two substantial beings is external to its terms, then these terms will not support it in existence: it must either fall into nothingness, or else it must be in its own right a quasi-substantial reality. But if this external relation is an independent being, it must be itself related to the terms which it is supposed to related, and with the reappearance of the original problem, we have entered on an

* above, pp. 119-121, 139-141.
** above, pp. 122-124, 141-142.

infinite regress. On the other hand, if the relations between beings are internal, the substantial independence of the terms will be destroyed. Internal relations make a difference to their terms; this means that the terms are affected from outside and cannot be independent substances. Thus, it would seem that the beings in the world are not substances, but internally related aspects of a substantial whole in which they are all included.

II. The answer to this dilemma was briefly indicated above*, but we must now develop it in more detail. The possible kinds of relation between two beings are not exhausted when both external and internal relations have been considered. It is not true that a relation must be either internal to both terms or external to both terms. This would be true, only if all relations between beings were symmetrical. But it is possible to think of an asymmetrical relation which is internal to one of its terms and external to the other. And this is no mere logical possibility, but a suggestion which may be applied to the world in which we live. The universe is no fixed and static system but is a flux of coming to be and passing away. The beings in the world are essentially time-conditioned: they are subject to a temporal process and they have temporal relations to their predecessors and successors. Now, temporal relations are fundamentally asymmetrical. Time has a direction: it moves forward into the future and the temporal

* pp. 142 - 143

process cannot be reversed. The relation of a past being to a present being is not the same as the relation of the present being to the past being. Now, if we are prepared to maintain that a substantial being is directly related only to its immediate predecessor and its immediate successor in the temporal series, then we may be able to answer Bradley's objection and to reconcile the substantial independence of a being with its relation to beings beyond itself. This means that contemporary substances cannot be directly related--relations between contemporaries, e.g. spatial relations, must be indirect. This is a rather surprising doctrine which runs counter to our common sense beliefs, but the conflict with common sense cannot be avoided, if the substantiality of the beings in the world is to be defended. For the relations between contemporaries are symmetrical; or at least, they do not have that fundamental asymmetry which would permit one to say that the relation is internal to one of its terms and external to the other.

To show that the relation between two beings which are not contemporary is, in some sense, asymmetrical is but the first stage in the argument. This "transtemporal" relation must be examined in more detail before one may conclude that it is neither internal to both terms nor external to both terms. Internal relations make a difference to the terms they relate, whereas external relations do not. Therefore, an asymmetrical internal-external relation must make a difference to one of its terms and not x to the other. Now, the transtemporal relation

of a past being to a present being meets this requirement. A past being may make a difference to a present being: the ubiquity of causal conditioning bears witness to the influence of the past on the present. Therefore, the relation between a past being and a present being is internal to the present being. But on the other hand, a present being cannot make a difference to a past being. The present cannot affect the past: for, once the present has come into existence, the past is fixed and unalterable. Therefore, the relation between a past being and a present being is external to the past being. There is another way in which one can prove that the relation between past and present is an internal-external relation. The relation between a past being and a present being comes to exist, only when the present being comes to exist. When the past being was itself present, its successor and its relation to its successor were as yet in the non-existent future. Therefore, this relation to the present being was not included in the internal character of the past being, when present and fully real. It is an external relation which the past being acquires only as it passes out of existence. But the relation is internal to the present being, since it is involved in its coming to be as the successor to the past being which it supersedes.

Now, if such transtemporal internal-external relations are the only concrete and immediate relations between the beings in the world, the relatedness of these beings will not clash

with their substantiality. Each being will have its moment of substantial independence. When present, a being will not depend on its successor: for its successor does not yet exist, and what exists cannot be said to depend on what does not exist. Nor does a being depend on its immediate predecessor. A more elaborate argument is required to establish this point; for a being is related to and affected by the being in its immediate past. But a close examination of the nature of this relation shows that it does not damage the substantial independence of the present being.

Although the past does affect the present, a past being does not affect a present being in such a way as to impose upon it the control of an external authority. We shall discuss in detail how the present is affected by the past when we come to consider the problem of causality, and here, we shall do no more than indicate some of the most relevant points. The past does not affect the present in virtue of any activity on the part of the past. For by the time the present is in existence and able to be affected, the past is no longer present and active. The connection depends on the activity of the present being which relates to itself the being in its immediate past. The present being includes the past being in its own constitution. As incorporated in the present being, the past being does not, of course, retain the full-blooded reality which it possessed when it was itself present. It is merely the skeleton left behind when the being has passed out of existence. Now,

although a being is affected by the skeleton of the past which it incorporates, this does not establish the ontological dependence of the present on the past. A substantial whole is affected by the specific nature of the parts it includes, but this negates neither its independence nor its priority.

But the most straightforward argument in favour of the substantiality of the beings in the world is simply this. A present being which is not related to any of its contemporaries is an independent substance, because it surely possesses a reality which is possessed neither by the beings in its past, nor by the beings in its future, and therefore, it cannot be said to depend upon them. The beings which make up the world are certainly not eternal and infinite substances. They are limited in duration and in many other ways. But when it is present, each enjoys its own moment of independent reality.

At this point we must consider a serious objection. The independence of the substantial beings in the world has been established, it may be urged, only because the interrelationship of these beings has been covertly denied. The interrelation of contemporary beings has been denied, and the only relations permitted to a being are relations to what is in its past and in its future. But in fact, there can be no relation between beings which are not co-present. A relation is real, only if both its terms are real. Now, when a present being is real, the being in its immediate past is not real, and when the past being was real, the present being was not. This fact was

used to prove that the two beings do not depend on one another, but it really proves much more than this--that the two beings are not even related. One can understand how there can be a relation between beings which are simultaneously real, but one cannot understand how there can be a relation between beings which are never both real at the same time. It is only by assuming a relation which is really no relation at all that one can pretend to reconcile the relatedness of a being with its independence.

In answer to this objection, we may first point out that the recognition of a relation between past and present is no assumption specially introduced in order to suit our own convenience. Although the relation between a past being and a present being is indeed mysterious, any realist theory must assume a connection between past and present to explain the unity of the temporal continuum and the efficacy of causes. Our view conflicts with common sense, not because we postulate a relation between past and present, which common sense accepts, but because we deny that contemporary beings are directly related. And although, in this instance, we are forced to correct the verdict of the plain man, we may claim that our view has the advantage of simplicity. Common sense assumes two very different types of direct relation--a relation between contemporaries, and a trans-temporal relation between past and present.

This, however, is an argument on which we cannot rely.

It will not trouble those who believe that the impossibility of relating a past being to a present being is simply further evidence of the unreality of time. Moreover, the argument may be answered even by those who are not prepared to deny the reality of time, if they maintain that the relation between beings which are not contemporary is mediated and indirect. An indirect relation between past and present may be derived from direct relations between contemporaries, if one assumes that two beings may both be contemporary with a third being, although they are not contemporary with one another. One must assume that a being may endure in such a way that it is co-present with one being during part of its existence, and with another being during another part of its existence. If this is so, this being may connect two beings which are not themselves co-present. And the theory which explains the relation between past and present as an indirect relation mediated by direct relations between contemporaries has as much simplicity as a theory which explains the relation between contemporaries as an indirect relation mediated by direct relations between past and present beings.

This suggestion is by no means devoid of difficulties. For example, how can one reconcile with its unity the temporal division within a being which is contemporary with things which exist at different times? But if we wish to maintain our view that the beings in the world are directly connected only with what is in their past and in their future--and this view

cannot be abandoned without abandoning the substantial independence of the beings in the world--then we must overcome the apparent difficulties involved in the conception of a direct relation between past and present. This relation, like all fundamental facts, is essentially obscure and mysterious, but it will seem impossible only if one is assuming the existence of an independent temporal order in which the past being passes out of existence before the present being comes into existence. If there is a temporal gap, however small, between the disappearance of the past being and the appearance of the present being, the objection stated above cannot be answered. One of the terms of the relation will have vanished before the other term comes to be. The past has no power to maintain itself in existence, unless it be sustained by the present. Therefore, the terms of this trans-temporal relation must be together in some sense. But this togetherness does not require that the durations of past and present overlap. The relation may be tangential: that is, the past being and the present being may be merely contiguous. Now, if one is assuming the existence of an independent temporal continuum, the assumption that past and present are temporally contiguous may seem arbitrary. But this assumption is by no means arbitrary if one accepts the theory defended in the preceding chapter, that space and time as such are not independent, but are constituted by spatio-temporal beings which are prior in reality. There can be no temporal gap between a being and its immediate predecessor in

the temporal series, if the temporal continuum is generated by the series of temporal beings. Adjacent beings in the temporal series are contiguous, because the distinction between the times at which they exist depends on the trans-temporal relation between them. It is this transtemporal relation between past and present which is responsible for the fact that beings exist at different times, and therefore, one cannot maintain that no relation between beings present at different times is possible. The ~~mtn~~ ontological ground of the transition from past to present is the trans-temporal relation of a past being to a present being.

Thus, every being is directly related to its immediate predecessor and to its immediate successor in the temporal series; for without this relation, it could not be said to have a predecessor or successor. But in addition to these immediate temporal relations, there are also mediate temporal relations. Every being mediates the relation between antecedent and subsequent beings. On the one side, a being is contiguous with its predecessor and on the other side it is contiguous with its successor, but its predecessor and its successor are neither contiguous nor directly related. They are related only because both are directly related to the being in the temporal continuum which separates them, from whose point of view they are respectively past and future. And the temporal relation between two beings may have any degree of mediateness: two beings may be separated and connected in time by any number

of intermediaries.

In addition to the temporal transition from a past being to a present being, we must also assume a quite different kind of temporal transition within every substantial being. If the universe as a whole is the macrocosm and every substance in the universe is a microcosm, we may distinguish these two types of temporal transition by calling them respectively "macrocosmic process" and "microcosmic process". Macrocosmic process builds up the temporal continuum of the universe: microcosmic process is the inner temporality of every real substance.

The assumption of this second kind of temporal transition is certainly puzzling and unusual, but it is difficult to see how it can be avoided. The beings in the world come into and pass out of existence, and one can hardly say that there is no temporal distinction between their origination and termination. Moreover, every being must have a certain duration and temporal spread, if it is to keep apart the beings with which it is connected at its boundaries, if it is to effect a real separation between past and future. Also, every being, while present, has no real relation to what is in its future. It acquires such a relation only when it becomes past, only when its own existence terminates. In order to become related to its successor, a being must undergo a process, a transition from presentness to pastness. These internal transitions within beings are the ground of the external transitions from being to being. Finally, we reconcile the independence of

a being with its connection to other beings, only by assuming in effect that the being both is related to and is not related to its successor. And self-contradiction is avoided only if one permits an internal distinction within the being--a distinction between the present existence of the being and the termination of that present existence.

We must be careful not to assimilate these microcosmic processes to the macrocosmic processes with which we are more familiar. In the case of a macrocosmic process there is a transition from a past being to a present being, but we cannot suppose a similar transition from past to present in the case of a microcosmic process. For this is a process occurring within a single substantial being, and all parts of a substance must be co-present. The whole can never be real if there is never a time when all its parts are real. One cannot maintain the unity of a substantial being, if one of its parts has vanished into the past, before another part comes into existence. If part of a being is present and another part past or future, then there is an ontological distinction within the being which destroys its indivisible substantiality. If there is a real division of this sort within the duration of any being, then that being is not a single substance, but two distinct beings, related as predecessor and successor. And if one does assume within a single being a distinction between parts which are past and parts which are present or future, one is committed to an infinite regress. For one can explain the transition from

one part to another only by assuming an inner temporality within each of the parts originally distinguished, and the same problem must be faced anew.

We must maintain that the present includes a certain temporal transition, that the present has a finite duration. When a substance is present, notwithstanding the temporal spread which it contains, it is the whole being which is present, and not a mere part of it. This is a very difficult doctrine to appreciate and accept, but it will seem <u>impossible</u> only if one insists on interpreting this internal transition according to the pattern of the external transition from being to being. And although it is difficult to accept a temporal transition which is not a transition from past to present, it is impossible to accept the alternative. It is difficult to believe that the present has a duration, but it is impossible to believe that the present is a punctiform instant which is a mere limit between past and future. In the first place, if the prsent is to be real (and only the present <u>is</u> fully real) it must have a certain "thickness". If the present is a mere point without duration, it exists for no time and therefore cannot be said to exist at all. A thing which disappears the moment it appears does not really appear at all. And secondly, if every present is an instantaneous moment, the paradoxes of Zeno are insoluble. The underlying basis of Zeno's arguments is the insight that no matter how many moments of zero duration are compounded, one will never obtain a finite duration.

however short. If a finite temporal process must be divided out into an infinite number of momentary presents, in order to get from the beginning to the end of that process, one must complete an infinite series, which is impossible.

The above account of time has by no means cleared away all the difficulties and obscurities connected with this problem. But it is at least a possible hypothesis, and this is a very important recommendation in view of the fatal difficulties which rule out competing theories which have, perhaps, a greater degree of superficial plausibility. This hypothesis, however, is so much at variance with our ordinary ways of thinking about time that it will be worthwhile, notwithstanding a certain amount of repetition, to restate our position from a slightly different perspective, making the focus of the discussion the problem of the derivation of time from temporal beings, rather than the problem of the relations between independent substances. The hypothesis seems absurd, if one ever loses sight of the fundamental tenet on which it is based--the metaphysical priority of finite temporal substances to the temporal continuum as such. We tend to imagine time as an independent extensive continuum within which the various temporal beings are positioned. We further suppose that this temporal continuum is infinitely divisible, which means, in effect, that it is actually divided out into an infinite number of instantaneous presents. But, as was noted above, an instantaneous present is a nonentity which cannot possibly be real, and moreover, a finite period of

time cannot be constituted by a number of moments of zero duration, no matter how many they may be. Also, in the previous chapter, we gave reasons for accepting the priority of temporal beings to time as such. Nevertheless, one must guard against the natural tendency, when examining the hypothesis at present under consideration, to slip back into the accustomed ways of thinking about time. Quite apart from the arguments against the validity of these accustomed ways of thinking, it is clearly illegitimate, when considering the possibility of a certain hypothesis, to assume without proof doctrines which that hypothesis explicitly denies. The present hypothesis will naturally seem nonsensical if one retains in the back of one's mind a belief in the independence and infinite divisibility of time. A just examination of this hypothesis must probe without preconceptions the internal consistency of this attempt to derive the temporal continuum from the nature of the temporal beings in the world, and must test the adequacy of this theory to account for time as it is encountered in experience--which is not necessarily the same thing as time as we are accustomed to imagine it.

We shall now expound the hypothesis itself in as straight_forward a manner as possible. Every substantial being in the world comes into existence and passes out of existence. Therefore, every substance has a definite duration. It is a definite happening or event. Without a temporal distinction between its coming to be and passing away, the conception of

an ephemeral substance would involve a contradiction. One must assume, as a ground which will make this conception consistent, that the substance exists and endures between its origination and termination. And unless the substance had a certain temporal extension and duration, it could not keep apart the past and future beings to which it is related on different sides, and the temporal extensive continuum would not be generated. This duration of a substance defines what we mean by the present. When a substance exists, it is indisputably present, and the nature of the substance will determine the nature of the present. Now, the identity of a substance is the unity of a whole: and the real existence of the whole involves the real existence of its parts: therefore, the various parts of the substance will be co-present, and will all exist so long as the substance exists. In spite of the internal transition from origination to termination, everything between the two limits of the substance will be co-present: a substance is an indivisible unity which cannot be broken up into real parts which are related as past to future. Therefore, the present is an indivisible temporal continuum.

This doctrine certainly contradicts the usual view of the relation between time and an enduring substance. It is natural to suppose that there is an independent and infinitely divisible temporal continuum through which a substance endures. To endure, it is supposed, is to remain present while the present changes. An enduring substance is a being which persists and

maintains its identity throughout a number of states or events which are not co-present. But we have just explained why it is illegitimate to reject a hypothesis because it conflicts with our natural assumptions. One cannot refute one hypothesis simply by assuming the truth of an alternative. And the greater initial plausibility of the alternative hypothesis is far outweighed by the grave difficulties which it is seen to involve on closer examination.

Another consideration which may lead one to believe that the various parts of a substance are not contemporary is that at one boundary, its origination, a substance is related to what is in its past, whereas at the other boundary, its termination, the substance is related to what is in its future. But why should we not maintain that the definite cleavages between things which exist at different times occur not within the limits of a single substance, but at the boundaries which separate one substance from another?

We must now take up again the problem of the connection between beings which are not co-present, the problem of the division between present and past. We may say, indeed, that a being is contiguous with the being in its immediate past, but we must be careful to stipulate that this contiguity is constituted by the immediate relationship between the beings: the relation does not occur in virtue of a prior contiguity. If we say that past and present beings are connected <u>because</u> they are contiguous, we are again illegitimately assuming an

independent temporal order in which the beings are placed side by side. It is only if one implicitly makes such an assumption that one will raise a question as to whether mere contiguity is a sufficient basis for a connection between beings, or suppose that a real relation requires the overlapping or interpenetration of the beings related. If we maintain that it is a trans-temporal relation between beings which is responsible for their contiguity in the temporal order, we shall not be troubled by this consideration. But once we have postulated the trans-temporal relation by which the temporal continuum is generated, there is nothing more to be said. We cannot provide a further elucidation of this conception of a relation between things which are not contemporary, or prove that a relation of this type is really possible. The only justification of the postulate is the adequacy of the system which is based upon it. The validity of the assumption can be tested only by inquiring whether it enables one to escape difficulties which are fatal to systems based on other assumptions. We cannot appeal to an immediate intuition which would prove conclusively that there is a direct connection between past and present beings and which would make the nature of this relation fully comprehensible. But the absence of any such intuition does not prove that this kind of relation is impossible, or even less likely than a relation between contemporaries. For we do not in fact possess an intuition which makes completely intelligible the nature and possibility of relations between contemporaries,

although we do not usually notice its absence because the conception is more familiar.

We were compelled to deny the existence of direct physical relations between contemporary substances, since such relations could not be reconciled with the independence of the substances. But it is not at all plausible to suggest that no two beings are contemporary, that the various members of the plurality of beings come to be one by one, so that there are never two in existence at the same time. One naturally believes that there are other beings contemporary with oneself and that there is a spatial order in addition to the temporal order. We must now consider whether it is possible for the theory developed above to admit the existence of a plurality of contemporary beings and to allow that there is an objective ground for the spatial order in which we ordinarily believe.

If there are many contemporary substances, these many substances must be interrelated. But they cannot be directly related, if they are to retain their independent substantiality. Therefore, one can maintain the existence of a plurality of contemporary substances, only if one can suggest an indirect relation which will keep the various members of the plurality together in the same universe. Now we shall be able to explain the nature of the indirect relations between contemporary beings if we correct an oversimplification in the above account of the immediate relations between substances. We talked as if every substance was directly connected with only one being

in its immediate past. But there is no reason why this should be so--there is no reason why a substance should not be directly connected with many past beings. Also, we described a case in which a past being was immediately related to only one present being. But again, there is no reason why this should be so, necessarily and always. It is perfectly possible that several substances relate to themselves the same antecedent substance as it passes out of existence. Now, if these suggestions are correct, there are <u>two</u> ways in which contemporary beings may be indirectly related. They may be related by the mediation of a being in their past, or by the mediation of a being in their future. The various strands which are separate in the present are gathered together in the past and in the future. If a present being relates to itself several beings in its immediate past, then these beings, which are not directly related because they are contemporary, are indirectly related in virtue of their common connection with the being which supersedes them. Also, if a past being is directly related to several beings in its immediate future, then these beings are indirectly related, because each is directly connected with one and the same past being. This second mode of mediation is more important than the first. The indirect relation of contemporaries by means of what is in their future will be a real connection only when the contemporary beings are in the past. For when the contemporary beings are present, their relations to what is in their future do not exist.

But the contemporary beings which are now present realities cannot be left completely unconnected. The present contemporary universe must be a unity now, and it cannot wait for the future to establish the required connections. Therefore, the unity of the present contemporary universe must be based on the relation of every present being to the same interrelated system of past beings. A necessary condition which must be satisfied by every being which comes into existence is that it be related to the same antecedent universe as every other present being.

Every present being must be related to the same past universe. But does this mean that every present being must be directly connected with precisely the same past beings? This is certainly not necessary: there will be a relation between two present beings which are only indirectly connected with the same being in the very remote past. And the empirical evidence, for what it is worth, suggests that beings are not directly related to every being in their immediate past* and that two contemporary beings are often connected only in virtue of indirect relations to the same being in the distant past.

In the first place, if the universe of contemporary

* We are defining the immediate past of a being as the group of beings contemporary with any past being to which the present being is directly related. If one chooses to restrict the immediate past of a being to the group of past beings with which it is directly connected, sometimes one will still have to use beings in the remote past to link contemporaries; for one will have no justification for believing that all present beings have the same immediate past.

beings is as widespread as it seems to be, if there is a spatial continuum extending to the farthest galaxy, then it seems quite beyond the power of a single very limited present being to relate directly to itself the entire antecedent universe. Secondly, a being is much more forcibly affected by what is in its vicinity than by what is remote. And a convenient way to explain this is to suppose that a being is directly connected with past beings in its immediate vicinity and only indirectly with past beings which are far away. Indeed, one might even claim that the distance between two contemporary beings is determined by the number of intermediaries required to connect them. Thirdly, the fact that even light and gravitational forces take time to travel tends to confirm the view that a substance is not directly related to all beings in its immediate past. Forces emanating from a distant star do not affect beings on the earth until after a certain interval of time has elapsed, the extent of the interval varying with the distance of the star. This means that the physical relation in virtue of which beings on the earth are affected by the light and gravitational forces generated by the star is indirect. There must be a series of intermediate beings by which the forces exerted by the star are transmitted to the earth. For a present being cannot be related to or influenced by what has happened in the remote past without the help of intermediaries. All forces exerted by any being are swallowed up by a temporal gap. Therefore, unless one makes the implausible assumption

that a being on the earth has a direct relation to a remote star in addition to the indirect relation whereby it is causally affected, one must admit that a present being is not directly related to an event in its immediate past, occurring in a remote region of space. A being is related only by a very devious route to a distant being contemporary with the past beings to which it is immediately related. The two beings are related only because they share a common ancestor in the very remote past.

To sum up, our position is that although all substances are necessarily interrelated, their relations do not infringe their substantial independence. For a substance is directly connected only with a being or beings in its immediate past or in its immediate future. And such connections do not prevent the substance from enjoying its moment of independence. In addition to these direct relations between substances, there are also indirect temporal relations whereby a being is connected with another in its remote past or remote future. And there are also indirect spatial relations between contemporaries which depend on a direct or indirect temporal relation to the same being in their past or future. Thus, the unity of the universe is not an "all-in-one" unity where the different members of the multiplicity are no more than incomplete aspects of a single substantial whole. Rather, the unity of the universe is the unity of what William James so aptly terms a "concatenation". The universe is, as it were,

a chain, and the substantial beings in the universe form the links of the chain. Each link is directly connected with at least one link on x either side, but it is connected with distant parts of the chain only by means of intermediate links.

III. But before leaving the topic of space and time, there is one further important difficulty which must be discussed--a difficulty which was examined, but not solved, in the previous chapter.* We have advanced a hypothesis which purports to explain how the extensive continua of space and time are formed by the direct and indirect relations between substantial beings. We have filled out the suggestion made in the previous chapter, that there are substantial beings in space and time which are prior to space and time as such. But we have not yet answered Kant's objection that since space and time are represented as infinite given magnitudes, they must be prior to the finite things in space and time, and moreover, cannot be objectively real things-in-themselves--they are simply a priori forms of sensible intuition.

If one wishes to reject Kant's conclusion that space and time are transcendentally ideal, one must reject his fundamental premiss that space and time are represented as infinite in magnitude. Kant believes that any representation of a finite space or time presupposes a space or time beyond, within which the boundaries of the finite extension are determined. If this

* cf. above, pp. 170-174.

is true, then space and time as such must be metaphysically prior to the finite beings in space and time. But is there evidence which will put beyond question the truth of Kant's belief? Inn ordinary experience, we certainly do assume a space or time beyond any finite extension or duration which we discriminate. For example, in visual perception, we recognise the existence of a space beyond the determinate objects which we actually observe. When we perceive an object with definite boundaries, we are also perceiving, however vaguely, a region beyond, within which the boundaries of the object perceived are delimited. But can one draw from these facts the conclusion that space and time are absolutely infinite, that a finite extension or duration, however large, presupposes a space or time beyond itself? Can one legitimately maintain the universal validity of rules which hold good in the very limited portion of space and time with which we are intimately acquainted? Is it not rather the case that the necessity of assuming a space and time beyond the limited parts of space and time with which we are directly concerned does nothing to determine whether space or time as a whole is finite or infinite? For even if space and time as such are finite entities whose limits are determined by what is not space and time, it will still be true that every finite part of space and time must be delimited by a space or time beyond.

Thus, Kant's assumption that space and time as such are infinite in magnitude has not been conclusively established

by an appeal to the evidence of experience. Nevertheless, it is certainly difficult to imagine the limitation of a finite space or time by anything except a further space or time. We have shown that Kant's position is not incontrovertible, but we have not shown that Kant is definitely wrong, and the investigation must be continued. At the same time, it will be convenient to deal with another Kantian doctrine which we cannot accept, the doctrine that space and time are infinitely divisible. We wish to maintain that there are indivisible substantial beings which set a real limit to the division of space and time. The two problems are best considered together, because the argument against the infinite divisibility f of space and time closely parallels the argument against the infinity of space and time.

Kant's suggestion is that space and time are infinite and infinitely divisible extensive continua. This means that, starting from a finite quantum of space or time, he supposes that there are two infinite series which may be constructed. We may add to the original quantum of space or time other quanta, no matter how many, without ever reaching a complete and final totality of space or time. And we may subdivide the original quantum as often as we like without ever reaching simple parts of space or time, i.e. parts which are not open to a further subdivision. Now, it is certainly possible for one to construct in one's mind these two kinds of infinite series, but is it true that the objective nature of space and time is such as to permit one to add finite quantum to finite quantum indefinitely without ever coming to a boundary of space or to a beginning

or end of time? And is it true that one can go on dividing indefinitely a real extension or duration without reaching an indivisible atom of space and time, which although no mere point or instant, is not really divided into different parts? Now, there is no reason why one should not admit that the series of time to come is really infinite. One cannot set a limit to the future or assign a definite end to time. And since one need not, indeed must not, assume the actual existence of all the members of the series of future time, one is not embarrassed by the necessity of admitting the actual completion of an infinite series. When we assert the infinity of future time, we are asserting that the series of events subsequent to the present will never be completed. Indeed, it is necessary to presuppose the infinity of time to come, if one is even to make intelligible the notion of an infinite series. An infinite series involves the repetition of a certain operation for ever and ever. And unless one admits the objective validity of the conception "for ever and ever" the conception of an infinite series will be strictly meaningless.

Now, if we are given a point of departure, i.e. a first term, a specific operation to be performed, and the possibility of repeating that operation by using the result of an antecedent operation as the argument of a subsequent operation, the ideal construction of an infinite series is always possible. But if one assumes that this ideal series has an objectively real correlate, one has no guarantee that this objective correlate

will be able to keep up with the infinite series postulated by a constructive imagination which considers itself immortal in the real infinity of future time. For example, taking the present moment as the first term of the series, and temporal precedence as the operation, and granting that the operation can be repeated by an application to the moment in the past which is the result of a previous application, one may construct ideally an infinite regression of past time. But this does not prove that the real series of past time is infinite. The real regression of past time may keep pace with the ideal series for a certain time, and then it may come up against a boundary which is not to be transcended. Similarly, one may imagine an infinite series according to which a finite part of space or time is subdivided ad infinitum, but it does not follow that there is no ontological limit which will bring to a halt the real division of the extensive continuum corresponding to the ideal series.

And there are very powerful arguments in favour of the view that the regress of past time is not infinite and that finite extensions and durations are not infinitely divisible. The underlying basis of these arguments is that it is illegitimate to ascribe to the actual and complete a character which may be truly ascribed only to the potential and incomplete. Those who maintain the infinity of past time and the infinite divisibility of finite quanta have attributed to what is past or present an infinity which may be properly attributed only

to what is future. One can form the conception of an infinite regress of past time and of the infinite divisiblity of finite quanta, because one is referring to an infinite series of mental operations in time to come. But the series of past time and the series of the actual divisions of a finite extension or duration cannot, in fact, be infinite: these series are actually completed, whereas an infinite series is a series which can never be completed.

These arguments have already been touched on in other contexts,* but they must now be reconsidered in the light of what has just been said. First, let us take the problem of the infinite divisibility of a finite duration or extension. If the infinite ideal series of the divisions of a finite duration or a finite extension is to have a basis in objective fact, if it is to correspond to a real series of divisions, the finite extension and the finite duration must be actually divided out into an infinite number of points or moments of zero magnitude. Certainly, a duration or extension may be infinitely divisible without being actually divided out, if all that is meant by its infinite divisibility is that one can set up an infinite conceptual series of divisions. Although one may legitimately claim that this conceptual series corresponds to real divisions for some time, if one claims that it corresponds to real divisions all along the line, the real divisions

* For the argument against the infinite divisibility of space and time, cf. above, pp. 212-213: for the argument against the infinity of past time, cf. above, pp.172-175.

of the extension or duration must be infinite in number and the end products of the division must be unextended points or durationless instants. Now, it is impossible for a definite duration to be really divided out into a number of instants which are without an internal duration. No matter how many instants are added together, a finite duration will not be produced. No matter how many instantaneous moments are traversed by a temporal process, time will never move forward into the future: it remains exactly where it was. We can never reach a finite quantity by adding together a finite number of zeros. One must therefore suppose that a finite duration is produced by combining an infinite number of instants. But this supposition is equally impossible. Starting from the instants, one could never reach a finite duration, and starting from a finite duration, one could never reach the instants without presupposing the actual completion of an infinite series--and this is an obvious contradiction, an infinite series being defined as a series which can never be completed. There is a similar argument in the case of space. A definite spatial extension cannot be divided out into a number of unextended points. If the number of points is finite, they cannot compose an extended magnitude: and the number of points cannot be infinite, since that would entail the completion of an infinite series.

Let us now consider the problem of the regress of past time. One can, indeed, construct in imagination an infinite series of past time, but is the real series of past time in fact

infinite? Now, in spite of the appearances, the ideal series is really an infinite progression, in the same way as the series of negative numbers is as much a progression as the series of positive numbers. That is, in each of these series, a term presupposes the terms which precede it in the series, but not those that follow it. In the ideal series of past time which we construct by starting from the present and working backwards, a term presupposes those terms which lie between it and the present, but does not presuppose terms in the more remote past. But the real series of past time is indubitably a regression. Each term presupposes all the terms which follow it in the series which starts from the present and moves backwards through time. Therefore, if we posit the real existence of the present moment, as we must, then we must posit the reality, in some sense, of all past moments which have ever existed. The actual series of past time is a completed series, the present moment being really a termination and not a beginning. Therefore, the series of past time cannot be infinite, since an infinite series is a series which can never be completed. The conception of an infinite regression involves a contradiction.

Finally, we must consider whether space is finite or infinite in magnitude. The ideal construction of an infinite spatial system is perfectly possible. Taking wherever one happens to be as the origin O, one can imagine a point d which is at a certain distance from O and another point e which is further from O than d is. One can go on to construct an

infinite series of points, each of which is more distant from O than its predecessor. But can one claim that this infinite ideal series corresponds to a real space? Is space really infinite in magnitude, so that we can continue the aggregation of finite spatial extensions without ever reaching the boundaries of space? Now the whole of space is at any time present and actual. Therefore, if we take any finite extension as a unit, the series generated by the addition of these units must be actually completed. Therefore, the series cannot be infinite: space must be finite in magnitude.

The above conclusion is subject to one possible qualification. If it is possible to compare the magnitude of space at one moment with its magnitude at another, if it is possible for space to vary in size,* then we must maintain, indeed, that space in the past and in the present is finite, but we may allow the infinity of space with respect to the future. That is, we may allow that in the future, space may grow to exceed any finite magnitude which is prescribed, however, large. This is in keeping with our general doctrine that since the future is potential and indeterminate, unlike the present and the past which are actual and determinate, the conception of infinity may be legitimately applied to what is future.

Thus, these arguments would seem to prove that there are

* We do not, however, wish to commit ourselves to the doctrine that space itself may shrink or expand.

ultimate indivisible quanta of extension and duration, since space and time cannot be infinitely divisible, and that there is a boundary to space and a beginning to time, since space and past time x cannot be infinite in magnitude. One may concede the infinity only of what is future--future space and the series of future time.

But it may be urged that it is not legitimate to prove that space and time are finite and are composed of finite indivisible parts by showing the impossibility of a real infinite and infinitely divisible spatio-temporal continuum. It may be objected that the opposition, e.g. between the propositions "Space is finite in magnitude" and "Space is infinite in magnitude is what Kant calls dialectical* opposition: it is not the analytical opposition of true contradictories. The contradictory of the proposition "Space is infinite" is the proposition "It is false that space is infinite " which is not equivalent to the proposition "Space is finite". "Space is infinite" and "Space is finite" are not true contradictories: both may be false, for both share a presupposition which may be mistaken--that there is such a thing as a real totality of space. Therefore, it is unjustified to argue from the falsity of the proposition "Space is infinite" to the truth of the proposition "Space is finite". And there are exactly similar objections in the other cases.

* Critique of Pure Reason, A 504, B 532.

At first sight this objection seems to have little force. For the common presupposition of the opposed proposition is a presupposition which it is difficult to doubt. It is difficult to doubt the reality of space, and if space is real, the totality of space must be real. But what makes this objection so very formidable is the argument that there are equal difficulties involved in the theory that space has boundaries, that time has a beginning, and that there are indivisible atomic quanta of space and time. If this is true, one has as much right to conclude that space is infinite because of the difficulty of maintaining that space is finite as to conclude that space is finite because it is impossible to hold that space is infinite. In this paradoxical situation, the only possible solution would be to deny the common presupposition made by both the apparent contradictories--that space is a real whole.

It may be alleged that the situation is very similar to the situation described by Kant in the first and second antinomies.* That there is similarity, one cannot, of course, deny. The first antinomy is concerned with the problem of finite or infinite totalities: the second antinomy is concerned with the problem of simple units or infinite divisibility. But in spite of the similarity, there is also a very significant difference. In the first antinomy, Kant assumes that space and time are infinite in magnitude. The question debated in

* Critique of Pure Reason, A 426-443, B 454-471.

the antinomy is whether the world, or the totality of the appearances in space and time, is finite or infinite as regards an infinite space and time. The thesis proves that there cannot be an infinity of past beings in an infinite past time, and that there cannot be an infinity of co-existent beings in an infinite space. The argument of the antithesis is first, that the world cannot be finite with respect to the infinity of past time: for this would mean that the world has a beginning preceded by an empty time, which is impossible: and second, that the world cannot be finite with respect to the infinity of space, since this presupposes an empty space beyond the limits of the world, and this empty space is indistinguishable from nothing. But the point which we are discussing is whether space and past time as such are infinite or finite. Since we are not willing to take the infinity of space and time for granted, from our point of view there are two common assumptions shared by both thesis and antithesis of the first antinomy, which may be put in question. Kant identifies as the culprit the assumption that the world is a real totality; but we would maintain that the mistake assumption is the tenet which we have just been attacking, that space and the series of past time are infinite in magnitude.

And there is a parallel difference in the case of the second antinomy. We have been considering whether space and time are infinitely divisible or are composed of indivisible simple parts. The problem of the second antinomy is whether

or not there can be indivisible and uncompounded simple substances in an infinitely divisible space. (Kant does not consider the related problem of whether there can be indivisible enduring substances with respect to an infinitely divisible time, but he could have constructed a similar argument in this case, if he had wished.) The argument of the thesis is in essence that a composite substance must be composed of simple substances, because, if in the analysis of a composite substance, we are unable to remove all composition, the composite will not be made up of substances, and therefore, will not be a composite substance. The argument of the antithesis is that a composite substance cannot be made up of simple parts, since every part of a substance, even if supposed simple, must occupy a space and whatever "occupies a space contains in itself a manifold of constituents external to one another, and is therefore composite."* Now, the argument of the antithesis is assuming the infinite divisibility of space--that space is not composed of simple indivisible parts. But we have been maintaining that this premiss is open to question. And this may be the illegitimate assumption which compels us to deny the truth of both the apparently contradictory alternatives.

Therefore, one might maintain with some justice that Kant's antinomies, far from constituting an instructive parallel to which one can refer when attacking the above argument against the view that space and time are infinite in magnitude and

* Critique of Pure Reason, A 435 B 463.

divisibility, really supply a valuable confirmation of the truth of this argument. There is obviously something wrong in a situation where one can prove the truth of two incompatible propositions, but why should one reject as mistaken the very natural assumption that the world and whatever exists in the world are thing in themselves, when in the course of developing the antinomies an assumption is made to which there are many independent objections, namely that space and time are infinite and infinitely divisible.

But this is a consideration which will not avail us if, in fact, there is an antinomy in connection with the propositions which we have been discussing: that is, if there are as cogent objections against the view that space and past time are finite and are composed of finite indivisible parts as there are against the view that space and past time are infinite and infinitely divisible. We have shown that our position cannot be refuted by a direct appeal to Kant's first and second antinomies, but we have not yet shown that our view is not involved in similar antinomies--antinomies which can be solved only by abandoning our fundamental belief in the reality of space and time. Therefore, we must now examine possible arguments against the limitation of space and the series of past time and against the assumption of indivisible spatial and temporal quanta.

At first sight, our position appears very weak. For how can one assume a limit to space without at the same time

assuming a space on the other side of this limit? How can a finite space be bounded by anything except a further space? Similarly, how can one think of a limit to the series of past time without presupposing a time prior to the limit which defines the supposed beginning of time? And how can one ever succeed in putting a stop to the division of the spatio-temporal continuum into smaller and yet smaller parts? These questions cannot possibly be answered unless we have recourse to our doctrine that the substances in the world are metaphysically prior to space and time and are responsible for the constitution of the spatio-temporal continuum. But if we do admit the priority of spatial and temporal beings to space and time as such, we now have a principle which will enable us to delimit space and time by a reference to something beyond themselves. In the first place, if we were right in maintaining that a substantial being does not exist for a mere moment, but has a certain finite internal duration, we can explain the nature of the limit set to the division of the temporal continuum into smaller and smaller parts. For on account of its necessary unity, the internal duration of a substance cannot be divided into parts. One may divide up a period of time, only so long as one does not split the internal duration of a substantial being. The internal durations of substances are the atoms out of which the temporal continuum is compounded and each atom of time, notwithstanding its internal complexity, is a real unit which cannot be broken up into parts. A similar argument is

possible in the case of space. One may argue that any substantial being which has a finite spatial extension cannot be divided into parts, and it therefore constitutes a real limit to the series of the divisions of a given volume of space.

And just as substantial beings put an end to the internal division of space and time, so in the same way, they may put an end to their indefinite extension. If space and past time are to be finite, there must be a reality by which they are limited. They cannot limit themselves, since the mode of limitation which is peculiar to space and time always presupposes a further space or time on the other side of the limit. But is there any reason why the spatio-temporal continuum as a whole should not be limited by the substantial beings by which it is constituted? There seems to be no reason in principle why substantial beings should not determine the boundaries of space and past time. Nevertheless, it is not easy to understand the nature of such limiting beings, nor to explain in detail how they fulfil their function. We shall therefore investigate more carefully the problem of the beginning of time, and we shall try to throw some light on this very obscure conception.

If time is to have a beginning, something must exist prior to the beginning of time by reference to which the moment of origination is determined. But if this thing is supposed to exist before the beginning of time, it would seem that one is implicitly assuming the existence of a time before the

supposed origination of the temporal series. This conclusion, however, may be escaped, if the account of temporal processes given above is correct. We maintained that what was called macrocosmic time is constituted by the activity whereby a subsequent being relates to itself an antecedent being and that the two beings are determined as respectively subsequent and antecedent by the relation between them. Now, if time has a beginning, time will begin when one substance related to itself an antecedent substance, which is not itself related to a substance in its past. That is, time will begin with the coming to be of a second substance in the universe, and the first substance will be prior to the second substance and hence to the beginning of time, although it will be determined as prior only when it becomes related to the second substance, i.e. only when time comes to be. Therefore, this first substance may function as a limit to time and may put an end to the regress of past time. Since time is essentially a relation between two beings, time may be limited by the earlier of the two terms which it arranges in temporal order.

The first being in the world is significantly different from all subsequent beings. All subsequent beings essentially involve a relation to antecedent beings, whereas the first being does not. But it is difficult to determine exactly how far this difference will modify its internal structure. For example, does the first being involve an internal transition? The internal transition of the other beings in the world is a

transition from a stage when they are related to antecedent beings to a stage when they are related to subsequent beings. Therefore, the first being cannot have an internal transition exactly like the transition within the other beings in the world. But it may have, nevertheless, some sort of internal transition and duration, and if it does, this will be perfectly compatible with its role as the limit to time, since every substantial being determines the limits of its own internal duration. This argument proves that there is a first being, significantly different from the other beings in the world, but it does not, of course, prove the existence of God. If one has other grounds for believing that God exists, one may find a reason for identifying with God this being at the boundary of the universe. But all one can say definitely about the first being in the universe is that it is different from all other beings, and one has no means of telling how radically different it is. We have been assuming that there is only one substance which determines the limit of time. The argument against a plurality of such beings is that a plurality of beings prior to the beginning of time would originally be unrelated, and a plurality of unrelated beings is impossible.

Kant shows that he is aware of the possibility of objections along these lines in the Observations on the Antitheses of the first and second Antinomies. He is attempting to answer objections from the side of Leibnizian Monadism. His arguments are very relevant to the account of the limitation

of space and time which we have been suggesting, since our doctrine is a kind of Monadism, although unlike Leibniz, we admit the possibility of real relations between monadic substances. The Leibnizian answer to the problem of the limitation of time is to substitute "for the first beginning(an existence preceded by a time of non-existence) an existence in general which presupposes no other condition whatsoever".* The Leibnizian answer to the problem of the infinite divisibility of space is to deny the applicability of the infinite mathematical series to the real world and to deny the priority of space to substantial beings, taking instead "the dynamical relation of substances as the condition of the possibility of space".** It is clear that these answers are basically the same as the solutions suggested above. Kant's objection to the Leibnizian position is that it employs the concept of objects which are not subject to the conditions which must be satisfied by anything which is a possible object of sensible experience. Every existence which is a possible object of experience must have a beginning and must presuppose a time prior to the time of its beginning. Therefore, the existence in general postulated by the Monadists is not a possible object of experience. Also, the Monadists have been assuming that substantial bodies are things in themselves which may impose upon space their indivisible unity, and not mere appearances

* Kant, Critique of Pure Reason, A 433 B 461.
** ibid., A 441 B 469.

which must necessarily conform to the infinitely divisible nature of the space in which they are placed and which they presuppose. But Kant maintains that the concept of an object which is not an object of a possible experience, the concept of a thing in itself which does not conform to the conditions which all objects of experience must obey, is an empty concept to which there is nothing corresponding in intuition, and with respect to which no synthetic knowledge is possible. This means that we cannot make any assertions about such an object, even that it exists. Therefore, we cannot assert the existence of a being which determines the limit of past time, nor can we assert the existence of things in themselves which are the ontological basis of spatial relationships.

But the Kantian answer to Monadism depends on the validity of the argument in the Transcendental Aesthetic. Kant calls the hypothesis of the Monadists an "evasion of the issue which has already been sufficiently disposed of in the Transcendental Aesthetic"*, but admits that "the argument of the monadists would indeed be valid if bodies were things in themselves."** Therefore, the antinomies do not constitute an independent argument against pluralistic realism. And we have already shown that Kant's arguments in the Transcendental Aesthetic are by no means foolproof.*+ We have maintained that an experience of substantial beings which are metaphysically

* Critique of Pure Reason, A 441 B 469.
** ibid.
*+ cf. above, pp. 158-175, 223-225.

prior to space and x time is perfectly possible, so that there is an intuition of an object corresponding to the concept of a thing in itself. The most formidable of the arguments on behalf of the priority of space and time was answered in the present chapter when it was shown that the evidence does not warrant the conclusion that the original representations of space and time are representations of infinite given magnitudes.*

Therefore, Kant's arguments against the very possibility of beings which can function as limits to the spatial and temporal continua and against the possibility of beings which can contain within their unity a finite spatio-temporal quantum are not cogent. But nevertheless, it must be admitted that the nature of these entities is extremely mysterious. How, for example, can a thing contain temporal and spatial distinctions without the disruption of its unity? Part of the difficulty in connection with these conceptions may be due, as we explained above, to an attempt to understand the notions while assuming a theory of the nature of space and time which is being explicitly rejected. However, even when we have guarded against this misunderstanding, a fundamental mystery remains. But the existence of such mysteries is no fatal objection to our system. No philosophical system can explain everything. One always comes up against an ultimate which cannot be explained in terms of more fundamental concepts. The element of mystery is not so conspicuous when a basic

* cf. above, pp; 223-225.

assumption is familiar and such as we are accustomed to, but it is there all the same. Certainly, this appeal to the ultimate mystery of things must be handled very carefully. For a system, no matter how ridiculous, can maintain its ground, if it is allowed to gloss over all its difficulties by claiming that they are mysteries which must simply be accepted on faith, just as an absurd theory will still be coherent if it is allowed to appeal to an omnipotent God as a deus ex machina to patch up all the discrepancies. But the fact that an appeal to God or to mystery can be used to make every system impregnable does not prove that a true system of philosophy will contain no mysteries or can dispense with an appeal to God.

CHAPTER SEVEN.

CAUSAL CONNECTION.

I. In the previous chapter, we examined the nature of the relationships which may connect the beings in the world without compromising their substantial independence, and we came to the conclusion that substantial beings cannot be directly connected with their contemporaries, but only with what is in their past and in their future. That is, the fundamental physical relations between substances are transtemporal relations, and it is these transtemporal relations which are responsible for the generation of the temporal continuum, which depends ontologically on the substantial beings which it incorporates. These basic relations between substances establish their terms as contiguous in time, and they also account for the unity of the universe in which every distinct individual is included. In the present chapter, we wish to show that the immediate physical relations between different substances have yet another important function--they are also causal relations.

The direct connections between past and present beings are internal-external relations--relations which are internal to the present and external to the past.* Now, internal relations make a difference to their terms, whereas external relations do not. This means that the internal-external

* cf. above, pp. 202-203.

relation between a past being and a present being makes a difference to the present being and does not make a difference to the past being. Now, the relation between cause and effect is also a transtemporal relation where the past cause does make a difference to the nature of the present effect, whereas the present effect does not make a difference to the nature of the past cause. Therefore, there are very good grounds for identifying the relation of causality with the transtemporal relation between past and present described in the preceding chapter. The fundamental physical relation between different substances is, indeed, something more than the relation of causality, as it is usually understood. For this relation is the ground of the temporal contiguity of the related beings, whereas, according to the usual notion, causal connection presupposes the temporal contiguity of the terms involved. Nevertheless, causal efficacy may be one aspect of this fundamental relation between independent beings.

If one refuses to accept this identification of the relation of causality with the transtemporal relation between independent substances examined in the previous chapter, one will be faced with a dilemma. Either one must deny the reality of causal connections, thereby dismissing peremptorily the evidence of ordinary experience, or else one must postulate the existence of two different kinds of immediate physical relations between substantial beings, and this will introduce into one's theoretical system complications which it is

difficult to explain or justify. Such complications, however, will have to be accepted, if one can produce good reasons which prohibit the assimilation of causal connection and the relation of a present substance to what is in its immediate past. The simplicity of the view suggested above will not save it, if it is inadequate to the facts, and we must now deal with two objections which purport to show that the relation of causality is essentially different from the relation between past and present beings with which it has been identified.

The first objection is that what has been taken to be the fundamental relation between substantial beings fails to meet all the specifications of causal connection because this relation is essentially a relation between a being and its immediate temporal predecessor, whereas causal relations may on occasion connect contemporary beings. Now, if there are causal relations between contemporary beings, these beings cannot be independent substances, since Bradley's argument that the interrelatedness of beings is incompatible with their independence can be answered only by denying the co-existence of the terms related.* Also, since there are certainly cases of causal connection where the cause is in the past of the effect, to assume in addition causal relations between contemporaries is to suppose that causality may operate in two very different contexts. Although this is not impossible, it is a complication which makes it much more difficult to

* cf. above, pp. 200-202.

comprehend the nature of causal connection.

In spite of these difficulties, causal relations between contemporaries must be accepted, if the empirical evidence puts it beyond question. The empirical evidence, however, is far from conclusive. In cases where cause and effect seem to be contemporary, scientific investigation generally shows that the apparent contemporaneity of cause and effect is an illusion. The correlation between the contemporary beings really depends on causal relations between beings which are not contemporary. Let us take as an example a case of apparent causal relations between contemporaries used by Kant--the case of a heated stove which is warming a room. "The stove, as cause", Kant maintains, "is simultaneous with its effect, the heat of the room. Here there is no serial succession in time between causes and effect."* In this case, the apparent contemporaneity of cause and effect can be explained away, even without an appeal to the scientific account of the nature and transmission of heat. It is not the present, but the past condition of the stove which is responsible for the warmth of the room. There will be no immediate drop in the temperature of the room, if the stove is removed. And if a heated stove is suddenly introduced into a cold room, the remoter corners will not be affected for some time. There are, of course, more formidable examples of causal relations between contemporaries--for instance, the gravitational forces which determine the relative

* Critique of Pure Reason, A 202 B 248.

positions of celestial bodies. But even in this case, the contemporaneity of cause and effect is illusory. Recent scientific discoveries have indicated that gravitational forces take time to travel and have their effect.

Thus, the fact that two contemporary beings are correlated in a definite way does not prove that there is a direct causal connection between them. No matter what correlations between contemporaries are discovered in experience, these correlations may be explained in terms of the causal relations of the contemporary beings to their antecedents, and the above examples show how in practice this may be done. Mere empirical evidence does not, of course, prove that there can never be causal relations between contemporaries. But the evidence of experience never compels us to assume causal relations between contemporary beings, and in view of the considerations mentioned above, it is surely unwarranted to make this assumption gratuitously.

One assumption which we have made in the course of this argument is that some causes are in the past of their effects. Now, if it could be shown that there cannot be a direct causal relation between a being and what is in its past, the situation would be completely changed. Instead of explaining the apparent causal relations between contemporaries in terms of causal relations between ~~things~~ past and present, it would be necessary to explain the causal relations between things which exist at different times in terms of the direct causal relations

between contemporaries. Now, if one accepts the usual view of time as an independent extensive continuum, it is certainly difficult to explain how a being can be causally affected by what is in its past. But there is no difficulty if one admits the account of the nature and generation of the temporal continuum given in the previous chapter. A being may be directly related to an immediate predecessor, because it is the direct relation between them which determines the two beings as respectively predecessor and successor.*

The second objection is more formidable. In the previous chapter, it was necessary to maintain that the connection between a past being and a present being depends on the activity of the present being. For the present being could not be an independent substance, unless it were the active partner in its relationship with the past. The relation between past and present is internal to the present and makes a difference to the present. If this relation depends on the activity of the past, this will mean that a present being depends on the beings in its immediate past, and is therefore not an independent substance. Now, although we must maintain that the connection between past and present depends on the activity of the present, if we are not to abandon our fundamental belief in a plurality of independent substances, it would seem that in a case of causal connection, it is the past cause which is active, and not the present effect. We normally suppose

* cf. above, pp. 205-209.

that a cause possesses some sort of power or force and that it may exert an influence beyond its own boundaries, acting directly on another being. We think of an effect, on the other hand, as the passive result or outcome of the activity of its cause. Therefore, it would seem that the relation between cause and effect cannot be properly identified with the relation between past and present described in the last chapter. In the one case, it is the antecedent being which is active: in the other case, it is the subsequent being which is active.

The only way to answer this objection is to reject the common sense belief that causal connection depends on the activity of the cause. It is, perhaps, a bold step to deny a belief which the plain man would defend so very tenaciously, but it is a step which can be abundantly justified by philosophical argument. Our first argument is, in essence, very simple. A cause does not really act on its effect, since the cause in in the past of its effect, and the past cannot be active in the present. When a being is past, it is fixed, unalterable, lifeless and inert. A past being may affect a present being only if the present being acts in such a way as to relate it to itself what is in its immediate past.

This argument depends on a doctrine established in the previous chapter, that every real being must have a definite duration.* This means that the production of any being is a process which takes time, a process contemporary with the

* cf. above, pp. 210-213.

being in question and hence in the future of any antecedent cause. Therefore, the production of a being which is an effect cannot be an activity of its cause. It is only if an effect were instantaneous, which it can never be, that one could suppose it to be the outcome or terminus of a process of production which is an activity of its cause.

This argument is not to be evaded by supposing that the cause is responsible for the production of the beginning of the effect, from which the rest follows. The continuation of a being does not follow automatically upon its beginning. A principle is required to account for the continuation of what has begun to exist. This principle will supplement the efficacy of the cause, and this means that it is not the cause by itself which is responsible for the production of the effect. The activity of the cause supplies no more than the initial datum which must be processed by the activity of the effect, if the effect is to develop into a real substance.

The second argument against the common sense view of causality is that common sense cannot explain how a being is transformed from the passive product of an antecedent cause into the active producer of a subsequent effect. The beings in the world are both effects and causes: they are the effects of what is in their past, and they are the causes of what is in their future. Now, common sense explains the production of an effect by a reference to the causal activity of an antecedent being, but this leaves unexplained what is, in this

system, the most important novelty in the universe--the novel causal activity which is superadded to the passive effect of an antecedent cause.

Thus, the arguments in favour of a distinction between the relation of causality and the relation between past and present beings analysed in the previous chapter are not conclusive: indeed, they have very little force, if any. Therefore, since there are no obstacles to the identification of these two relations, one should accept what is the simplest solution. Now, this identification has one most important consequence. It establishes the universal validity of what we shall call the Principle of Causality, which lays down that every being in the world is the effect of an antecedent cause or causes. Everything is necessarily subject to causal conditioning.*

The proof of the Principle of Causality is quite simple. Every being which comes into existence must be directly related to at least one being in its immediate past. Without such a connection to the past, the being would not form part of this universe, and therefore could not exist, since a plurality of unrelated universes is impossible. Now, this relation of a being to its immediate past is the relation of causality: it is a relation which is internal to the being and which makes a difference to it. It follows, then, that all beings in the

* Strictly speaking, there is one exception to this principle--the First Being or First Cause which is the real limit to the regress of past time. Cf. above, pp. 238-240.

world are necessarily involved in causal relations with their antecedents.

This does not, however, establish the truth of Determinism: it does not prove that the nature of everything is completely determined by the nature of its antecedent causes. We have shown that all beings are necessarily involved in causal relations with their predecessors, but we have not yet specified the nature of these causal relationships. It is very often assumed that the very meaning of the concept of causality is such that an effect follows necessarily upon its causes in accordance with a definite rule. But we maintain that the concept of causality implies no more than that a cause must affect or make a difference to the being which is regarded as its effect. Of course, if one chooses, one may always define the term "causality" in such a way that there is causal connection, if and only if the nature of a being is completely determined by its causes and similar causes have similar effects. But the existence of this kind of causal connection has not been established by the above discussion. We have therefore adopted a less stringent definition of causality, which provides a term to describe, without committing us to assertions not warranted by the evidence, the relationship between two beings in a case where the one is affected by the other. The Principle of Causality, whose universal applicability we have defended, does not affirm that an effect is completely determined by its causes, and it does not affirm

the uniformity of nature, or even that there are any general causal laws. It is no contradiction to maintain both that every being is affected in a definite way by an antecedent cause or causes and that there is no connection between the ways in which any two beings are affected by their causes.

II. There is, however, good empirical evidence that there is a certain order in the natural world, and the systematic science which assumes the regularity of nature has been conspicuously successful. Therefore, we must consider whether it is possible to formulate a Law of Causality, which will supplement the above Principle of Causality. The Principle of Causality merely affirms that every being has causal relations with its antecedents: the Law of Causality would prescribe a rule to which all cases of causal connection must conform: it would determine, in general, the way in which a being is affected by its antecedents.

The two versions of the Law of Causality which have been influential in the history of science and philosophy may be epitomised as follows--the effect is like its cause; and, like causes, like effects.

The first version is the Aristotelian view. Aristotle held that a being and its efficient cause are always alike in species. This theory works quite well in biology, and it is borne out by the fact that an animal generally reproduces its own kind. But the main weakness in Aristotle's theory is

that it can explain only a very limited portion of the phenomena. We have argued that every being in the world is affected by an antecedent efficient cause. But Aristotle can reconcile his account of the nature of efficient causality with the facts of experience, only by imposing severe limitations on the range of its operation. Aristotle must abandon to chance and accident all processes where a subsequent being does not resemble its immediate antecedent. This means that Aristotle must concede that almost the entire field of non-biological phenomena is inexplicable by the scientist in terms of efficient causality. In the case of nearly all processes in the inorganic world, the results do not resemble their antecedents. For example, water is produced through the combination of hydrogen and oxygen in combustion, but water resembles neither the hydrogen nor the oxygen from which it has been produced. And even in the case of biological phenomena, the range of efficient causality is very limited. An efficient cause is responsible for the essential characteristics which define the species of a being, but the other characteristics--the accidental characteristics--are due to chance and cannot be explained by the scientist. For example, father and son are alike in that they are both human beings. The father is the efficient cause of the essential characteristics of his son and determines the species to which he belongs. But a son has many accidental characteristics which may differ from the corresponding characteristics in his father. The son may have brown

hair, while the father has black hair: the son may be tall and the father short. These characteristics, Aristotle must say, are not due to the efficient causality of the father.

There is another important objection against the Aristotelian view. Even if one admits that it is in principle legitimate to make a distinction between essential characteristics which are involved in efficient causality and accidental characteristics which are not, Aristotle's theory will not be plausible unless he can supply some independent basis for the distinction between the essential and the accidental characteristics of a being. If the Aristotelian merely says that the essential characteristics of a being are those characters which it shares with its immediate antecedent, then the distinction will be simply an ad hoc assumption, specially designed to get round the obvious fact that a being rarely resembles its predecessor in every respect. Now, Aristotle does attempt to provide an independent ground for his distinction, maintaining that the essential characteristics of a being are those which define its biological species. But Aristotle himself recognises that there are biological facts which cannot be easily reconciled with this suggestion. He is embarrassed by the existence of hybrids, e.g. the mule, where the offspring seems to differ in species from both its parents. And the evidence now available which suggests that the various biological species at present in the world have evolved from ancestors very unlike themselves confirms that

living beings dom not always reproduce exactly the species of the beings which we naturally take to be their efficient causes.

These weaknesses in the Aristotelian account of the nature of efficient causality led modern scientists to formulate a different version of the Law of Causality. Scientists could not be forever satisfied with a universe in which the scope of scientific knowledge was so severely limited and in which so much was left to chance. Modern scientists do not claim that an effect must necessarily resemble its cause: they are satisfied by the more modest principle that similar causes have similar effects. But their modesty in this respect is compensated by more far reaching claims with regard to the jurisdiction of the Law of Causality. Unlike the Aristotelian, the modern scientist leaves nothing to chance: he maintains that all natural processes and phenomena are governed by causal law. This second version of the Law of Causality was ~~j~~ justified by the success of the predictions which were based upon it. The Aristotelian, who abandoned to the vagaries of chance the bulk of what went on in the world, was in a weak position when confronted by rivals who could usually predict every detail of what was about to happen.

We shall argue that neither of these two important historical versions of the Law of Causality is strictly valid, although <u>both</u> do contain an element of truth. Our method will be to attempt to throw light on the question of the Law of Causality by making a closer investigation of the nature

of causal connection. In the course of our enquiry, we shall utilise two distinct sources of information. We may distinguish the two sources from which we get evidence about the nature of causality by calling one the a priori source, and the other the empirical source. The terminology is not strictly valid, since both sources of information really depend on experience. No an priori analysis of the concept of causality is possible without an experience of the fact which this concept denotes. Nevertheless, one may make a generalised analysis which is based on the experience of a single case of causal connection, and it is helpful to call this an a priori analysis in order to contrast it with the account of causality which makes use of a wide range of empirical observations--which surveys all cases of causal connection which have come within our experience.

We shall first appeal to what we have called the a priori source of evidence and we shall attempt a direct analysis of the nature of causality. The first stage in this analysis has already been carried out and it has been established that in a case of causal connection, a being is affected by the being or beings in its immediate past. The next stage is to explain how it is possible for one being to affect another which is not contemporary with it. If one can explain what makes it possible for one being to affect another, it seems quite likely that at the same time one will discover a rule governing the way in which one being may affect another--and such a rule would be the desired Law of Causality. Of course,

any Law of Causality derived from this a priori analysis must be consistent with the information about causality provided by the second source. We must be prepared to modify the Law of Causality which is extracted from the direct analysis of the concept, when such modifications are required in order to avoid a clash with the information derived both from common sense empirical observations and from the investigations of systematic science.

The first principle which we take to be established by the direct analysis of the nature of causal connection is that a past being can causally affect a present being, only if that past being somehow persists in the present. Causal connections are due to the persistence of the past in the present.

No one can deny that if the past does persist in the present, it will affect and make a difference to the present. But one might suggest, perhaps, that this is not the only way in which it is possible for the past to affect the present. One might argue that the past may affect the present in much the same way as a mould affects its cast, viz. by providing from the outside, boundaries and limits to which the present must conform, without being in any way an ingredient in the very stuff of the present.

This suggestion is plausible because it is based on an analogy drawn from a common situation in ordinary experience. The plain man assumes a continuum of co-existence in which a being is affected by contemporaries which circumscribe the

field of its existence without having any access to its internal constitution. Beings maintain boundaries which may not be crossed and they limit and affect other beings in as much as they resist and prohibit any intrusion into their own domain.

But this analogy cannot withstand critical examination. In the first place, the very base of the analogy is insecure. The common sense account of the relations between contemporaries is not ultimately valid. We argued in the previous chapter that there can be no real and direct relations between contemporaries: contemporaries can be related only by the mediation of what is in their past and in their future. And secondly, even if one were to admit that a being may affect its contemporaries from the outside without entering into their internal constitution, it does not follow from this that a being can affect in a similar fashion what is not contemporary with it. There is a very significant difference between the two cases and one has no warrant for assuming that this difference is irrelevant. If contemporary beings form a continuum of co-existence, it is at least possible to imagine how one being may affect another from the outside by its very occupation of a p specific region in this continuum. But one finds it difficult even to conceive how one being might affect another without penetrating its internal character, when the two beings are not contemporary and do not co-exist.

With the refutation of the above suggestion, one finds

that there is no plausible alternative to maintaining that the past affects the present because it somehow persists in the present. However, one clearly cannot hold that a past being as such may persist in the present. A past being is restricted by its very nature to the time at which it existed, and it cannot be significantly said to exist at any other time. Thus, when we say that the past persists in the present, we must mean no more than that an element in the constitution of a past being may persist in the present. This is sufficient to explain how the present may be affected by the past, and no more may be demanded without violating the very conception of the past.

The problem is now to identify this enduring element. The element in question must be such that it is not tied down by any necessity to the particular occasion when the being in which it is included is a present reality. Now, there is in every real being an element which meets this specification--the element which may be called alternatively the nature, character, essence or definiteness of the being. Every being has two sides to it: it has existence, which determines that it <u>is</u>; and it has a definite character, which determines <u>what</u> it is. The existence of a being is by its very nature restricted to the particular time when the being actually exists, but the definite character or essence of the being is not necessarily restricted in this way. Now, we are not <u>assuming</u> that the definiteness of a being is a universal

character which may in fact be repeated by another distinct being. The mere analysis of the concept of the definiteness of a substantial being does not reveal that this definiteness is a universal character and not an individual essence. But on the other hand, this analysis does not establish that the definiteness of a being is an individual essence and not a universal character. This means that it is not in principle impossible for the definiteness of an individual to be a universal. The proof that the definite character of a being is in fact a universal, an element which may persist so as to determine the character of a subsequent being, is that the existence of causal connections requires the persistence of some element in the cause, and the definiteness of the cause is the only available candidate for the position. This proof is not a logical demonstration, since it is always possible that there is some other element in the past cause which persists in the present effect and which is responsible for the causal connection. But in the absence of any concrete suggestion, this general possibility is of little importance.

If the above argument is correct, an extremely important conclusion has been reached; for the argument establishes the existence of universals. The universal is an entity which is very useful for many philosophical purposes. For example, universals provide an objective basis which will explain the formation of general concepts. But many philosophers are unwilling to admit the existence of universals, because they

are naturally reluctant to postulate the existence of an element so radically different in character from the individual and particular beings which constitute the physical world. They wish to avoid the dualism involved in such a postulate and the consequent problem of explaining the relationship between the two fundamental modes of being, universals and particulars. But we have now shown that the existence of causal connections between individual substances implies the reality of universals and we have also explained, to some extent, the nature of the relations between universals and particulars, by showing that universals have an essential role and function in the world of individual beings--they are necessarily involved in the real physical relations between different individuals. We have not, indeed, made the connection between universals and particulars completely intelligible, but this is probably something which is beyond the power of the philosopher. The co-presence in the universe of universals and particulars must be accepted as a fundamental fact: the relation between these two basic elements is sui generis and cannot be exhaustively explained in other terms. But the abovex account of causality has at least brought together the two main problems which confront a philosopher who believes both that there are universals and that there are many substantial individuals in the world--the problem of the coherence of universals and individuals and the problem of the coherence of the many substantial individuals in the one world.

For we have shown that universals are implicated in the causal relations between substantial beings.

Causal connection, then, involves the persistence in the effect of the universal character of the cause. Now, if we maintain that the character of a cause is always reproduced exactly by its effect, we shall be accepting the Aristotelian account of the nature of efficient causality, while refusing to agree to the limitations which Aristotle puts on the range of its operation. We shall be endorsing the Aristotelian version of the Law of Causality, but our general position will be much more extreme, since we also accept a Principle of Causality which lays down that every being in the world is an effect of some antecedent cause. Since we cannot allow that things may come into existence by chance without causal relations to any predecessor, we shall be committed to the view that every being is the exact replica of an antecedent cause. But immediately one takes account of the evidence supplied by our other source of information about causal relations---the empirical source---this view is seen to be clearly untenable. In the first place, if every being is the replica of an antecedent cause, then every stage in the history of the universe must be a simple repetition of the preceding stage, so that the world will never change in character---and this is obviously untrue. Secondly, there is overwhelming empirical evidence that beings may be causally connected although they are not identical in character. Occasionally, an effect does seem

to resemble its cause. And if what the plain man describes as the persistence of a material substance, e.g. an atom of hydrogen, is to be interpreted as the continual re-enactment of the same definite character by every member in a series of ephemeral beings, each related to its successor as cause to effect, then there will be a considerable number of cases where an effect reproduces the character of its cause. But one cannot reasonably deny that there are also a very large number of cases where two beings are causally related although not identical in character.

It seems, therefore, that there is an irreconcilable conflict between the information about causality derived from the a priori and empirical sources. The a priori analysis reveals that the character of a cause must persist in its effect, whereas the empirical evidence shows that the characters of causes and effects are by no means always identical. But one may arrange a compromise between these two apparently contradictory conclusions if one maintains that the character of a cause does indeed persist in its effect, but that it may be altered and modified by its new context. The a priori examination of causality establishes that the character of the cause must somehow persist in the effect, but it does not establish that this character must persist unchanged.

This compromise becomes much more plausible once we correct a serious oversimplification in the original account of causality. For the sake of simplicity, we have been

describing situations where a cause has but one immediate effect and an effect has but one immediate cause. But in the real world, causal situations are generally much more complex than this. The evidence of experience is that many beings are causally affected by several immediate antecedents. For instance, a human being is causally influenced by his own past states and by many external factors. Moreover, further evidence that a being has more than one immediate cause was supplied in the previous chapter, where in order to explain the existence of the spatial continuum, we had to assume that a being may be directly connected with many beings in its immediate past.* Since a being is necessarily affected by its relations to the past, this shows that a being may have many causes.

If a being may be the effect of several distinct causes, one may deduce, without consulting the empirical evidence, that an effect cannot always be exactly like its cause--so long as one rules out the improbable suggestion that the various causes by which a being is influenced are themselves always identical in character. One and the same individual cannot be a reproduction of the characters of several <u>different</u> causes. It may be suggested, however, that the character of an effect is an aggregate of the different characters of its various causes, so that the definiteness of the cause, although not <u>identical</u> with the complete definiteness of the effect, does

* cf. above, pp. 318-320.

persist in the effect as a component in its character.

This view would reconcile with the fact that a being may have several different causes the thesis that the universal character of the cause is preserved in the effect. But there are two very good reasons why this view should not be accepted. In the first place, it conflicts with ordinary experience no less than does the view that an effect is always exactly like its cause. A survey of the various causal situations which we encounter in experience makes clear that the character of an effect is rarely, if ever, a mere aggregate of the characters of its causes. And in the second place, the unity of an effect is the unity of a substantial being, so that even without studying the empirical details one can see that it is most unlikely that the character of an effect will ever be simply an aggregate of the characters of its causes. For a substantial being has an intimate organic unity which makes a difference to the items which it organises. An individual substance is no mere aggregate, since its reality is prior to the reality of its parts, and not vice versa. This means that the characters of the causes of a being, as included in the constitution of the effect, are not exactly the same as they were when they defined the natures of the separate causes: the characters are altered by the novel context in which they are placed.

Therefore, the theory which best accounts for the facts revealed both by a priori analysis and by empirical observation is this. Past beings are capable of affecting present beings,

because and only because their characters have the power to persist in the present. These characters, however, do not persist unaltered; for the present being carries out a synthesis which modifies the elements contributed by its past causes. This theory does not conflict with the evidence of experience: for it does not imply that the character of an effect either is always identical with the character of its cause or else is a mere aggregate of the various characters of its several causes. Nor does it conflict with what is discovered by a generalised analysis of the causal situation: it allows the persistence of the past in the present and yet gives due weight to the concrete novelty of the synthetic unity by which the persistent elements are combined.

The one difficulty in this theory is that it involves the assumption that the character of a being may reappear elsewhere in an altered form. One must assume the reality of an entity which can exist in different contexts and which can maintain its identity, although modified by its various situations. Now, this is certainly a very puzzling conception. One can show why such an element must exist by pointing to the facts which it is required to explain, but one cannot fully comprehend its nature, nor can one understand in detail how it coheres with the individual substances which make up the physical world. This obscurity, however, is not surprising. If the conception of such an entity is valid, it is certainly of so fundamental a nature that one cannot

reasonably demand that it be explained in other terms.

III. There is, however, in experience additional evidence confirming the existence of elements of the kind discussed above. Because of the extremely puzzling nature of these entities, this is evidence which must be investigated, even at the expense of a slight digression from the main theme of the present chapter. The evidence in question is furnished by the existence of the general concepts which are used in thought and language. There must be some sort of ground which provides an objective justification for general concepts and this gm ground, it seems, is much the same sort of entity as has been assumed to account for the influence of the past on the present. If different individuals may all be properly described by one and the same concept, then these different individuals must share one and the same characteristic, which must therefore be a universal identity amid difference.

When we examine in detail the use of general concepts to describe the physical world, we discover a fact which is of the utmost significance in view of our contention that the character of a cause persists in its effect <u>in an altered form</u>. This is the fact that the same concept may be used to describe beings which are not exactly identical in character. There are two different ways in which beings may be partially identical in character. Since the characters of the beings in the world are generally very complex, it often happens that two

beings are identical in some respects and different in other respects. For example, a red sphere and a blue sphere are identical, in that they are both spherical, but different, in that they differ in colour. But it is not this kind of partial identiy which is significant in the present context. Obviously, one can apply the same concept to two beings which are exactly identical in some respect, even although they are not identical in total character. But sometimes, one uses the same concept to describe beings which are not exactly identical, even in one respect. One may legitimately say that two things are red, even although the one is brick red and the other is pillar box red. When we investigate the realm of general concepts, we discover that they are not all on exactly the same level: rather, they are arranged in a kind of hierarchy. We may describe the structure of this hierarchy by saying that some concepts are generick and some concepts are specific, or more precisely, that some concepts are more generic and some concepts are more specific. To give an example, colour is a very generic concept under which may be subsumed the various more specific kinds of colour such as red, blue, and green. And under each of these various kinds of colour may be subsumed all its completely specific shades.

There is an alternative terminology which makes use of the notions of determinate and determinable. The definite character of any real being is fully determinate. For example, a particular tomato is a completely determinate shade of red. But one is not obliged to describe an individual by using

concepts which refer exclusively to its various determinate characteristics. It is legitimate, and in ordinary life usual, to employ concepts which refer indifferently to a number of distinct determinate characters. These concepts are determinables. They are, in a sense, ambiguous: they must receive an added determination before they will refer exclusively to a specific kind of determinate character, and there are alternative ways in which the character of each determinable may be further determined. We should also notice that there are various grades of determinables. A determinable characteristic may be itself a determination of some higher determinable. The various kinds of colour are determinables with respect to their determinate shades, but they are also determinations of the higher determinable, colour in general.

Two beings which may be properly described by the same concept must be in some way identical. That is, there must be an objective basis of identity in the things described which justifies the identical description. Therefore, when two beings are to be described by the same determinable concept, they must be in some degree identical in character, even although their determinate characters are not the same. Now, this seems to be very much the same sort of identity in spite of difference as we were forced to assume in the analysis of causality. In a case of causal connection, the effect in some way reproduces the character of the cause, although cause and effect are not necessarily exactly the same in determinate

character.

We are not, however, attempting to explain the transmutation in character which takes place in causal connection in terms of the distinction between determinable and determinate. We are not claiming that the identity in character between cause and effect is simply the identity of the determinable under which the characters of both may be subsumed. For it is possible that it is the transmutation of character involved in the concrete physical relation between different ~~a~~ individuals which is the more fundamental. The determinable concepts used by conscious subjects may be by-products of the causal relations between different substances. But for our present purposes, it is not necessary to solve the very difficult problem of the exact relations between the two types of identity in difference. We have referred to the existence of determinable concepts, only in order to show that there is evidence from another source of the existence of the same general sort of identity amid difference as we discovered in causal connection.

But some philosophers would object that the existence of determinable concepts cannot be legitimately used to confirm the existence of universal identities in difference. We have been maintaining that the same determinable concept may be applied to ~~x~~ every member in a certain group of distinct individuals, only because of a universal identity which permeates the group. Now, the existence of such a universal identity would certainly justify one in predicating this concept of all

members of the group, but some philosophers believe that an alternative justification is possible--a justification, moreover, which does not involve the postulation of peculiar entities which maintain their identity in spite of the plurality of their instantiations. It has been suggested that the reason why one may predicate the same determinable concept (and the same determinate concept, too) of different individuals is simply that these different individuals are similar in character. When this suggestion is examined, however, it turns out that it does not have the advantages which it is supposed to have. The reason why the similarity theory has attracted empiricists is that unlike its rival, it does not seem to require the postulation of any unusual metaphysical entities. But the similarity theory must assume objective unanalysable relations of similarity existing between the different individuals which may be described by the same concept. Now these objective relations of similarity are surely entities of some sort, and the existence of these relations requires explanation and justification just as much as does the existence of the universals assumed by the alternative view.

Thus, the supposed advantage of the similarity theory in respect of simplicity is only apparent. Both theories equally require the assumption of some entity to serve as an objective ground which will justify the classification of different individuals by means of general concepts. The disagreement between the two theories concerns the proper description of

this entity---of this objective ground. The partisans of similarity are anxious to avoid the imputation that the objective ground is a thing---that it is at all like the individual beings which exist in the world. But the supporters of universals are quite prepared to admit---indeed, they insist---that universals differ in many important respects from substantial bdings. In the first chapter, we resolved the initial paradox of the one and the many by distinguishing between different modes of being. There is a primary mode of being---substantial being---which we suppose to be enjoyed by the real, concrete, physical things in the world. But there are also secondary and derivative modes of being which, although ontologically dependent on substantial being for whatever reality they possess, are nevertheless distinct modes of existence. These derivative modes have a considerable importance in a system of metaphysical pluralism; for although they cannot exist unless they depend on some substance or other, they are not restricted by any necessity to a dependence on this or that particular substance. The same entity may depend on several different substances and it may therefore serve to bind together the plurality of independent substantial beings. The universal is an entity of this sort: it cannot exist without the support of some substance, but it retains its identity, even when it qualifies several different substances.

Both the above theories, if stated carefully, can account

in their own way for the facts of experience.* How, then, is one to decide between them? First, one may seek to determine the intrinsic plausibility of the competing views. Which theory offers the more convincing description of the objective element which justifies the use of general concepts? The second relevant consideration is which of the two view is superior as an explanatory hypothesis. Does either suggestion account for other facts over and above the facts which it has been specifically invoked to explain?

It is by no means easy to assess the relative inherent plausibility of the "similarity" theory and the "universals" theory. One's decision will rest on an intuitive judgment as to what sort of element is likely to be ultimately real. The proponents of universals may argue, with a good deal of cogency, that their adversaries, in their anxiety to avoid the hypostatisation of the element justifying the existence of general concepts, have assumed something which is too insubstantial to be an ultimate ingredient in reality. An unanalysable relation of similarity between different substances is not the sort of thing which might be a fundamental element in the universe.

But although this argument might be accepted by those who are already sympathetic to universals, it would not convince those who are committed to the similarity view. To them, it would seem to be relying on what they consider the basic superstition behind the theory of universals, the supposition

* cf. H.H. Price, Thinking and Experience, Chapter I.

that the objective ground underlying general concepts must be some sort of thing.

But if the supporters of universals adopt the second line of approach, they can present a case which their opponents will find more difficult to answer. As an explanatory hypothesis, the theory of universals is very much superior. The theory of ultimate similarities is an ad hoc hypothesis which will explain only the formation of general concepts. But the theory of universals can also explain a wide variety of other phenomena. As we have seen, universals may also be used to explain causal efficacy, to explain how the present may be affected by the past. And we shall discover that in solving the problem of causality, the theory of universals also provides a solution to a number of other important philosophical problems. Universals are required to explain the experience of other beings, memory, personal identity, and the element of permanence in a changing universe.

The argument at this point may appear to be circular. We appealed to the evidence furnished by the use of general concepts to confirm our account of the function of universals in causal connection. And now we are appealing to our account of causal connection in order to establish that the justifying grounds of general concepts are universals and not ultimate relations of similarity. But the procedure is not as illegitimate as it might appear at first sight. We are trying to show that the same fundamental explanatory hypothesis will

cover two very different kinds of empirical fact. Therefore, the fact that universals are capable of supplying an objective ground for general concepts will confirm the theory that universals are involved in causal connection, and vice versa. A solution which needs to postulate only one kind of entity in order to explain both sets of facts will have the advantage over solutions which require separate postulates for each set.

IV. Returning from our digression, let us first point out, in passing, that the fact that one and the same being may have several distinct causes, which explains why the character of an effect cannot always be an exact replica of the character of its cause, also supplies a valuable confimation of a doctrine defended above, that in a case of causal connection, the relation is constituted by the activity of the effect and not by the activity of the cause. An effect is a novel synthesis of the contributions of its various causes. Now, this synthesis cannot be due to the activity of the causes, since these are intrinsically separate and disunited. The synthesis must therefore depend on the unity and activity of the effect. It is the effect which is responsible for the relations whereby it relates its causes to itself and brings them to a unity which they did not possess before.

Although the Aristotelian version of the Law of Causality must be rejected as it stands, it does contain an element of truth, in that the character of the cause is re-enacted by

the effect, even if it be altered, perhaps very drastically, in the process. But although the Aristotelians have indicated what is the ultimate ontological foundation of causal connection--the persistence in the effect of the character of the cause--their theory is of little use for the purposes of science and prediction, since we have no means of foreseeing a priori the nature of the modification imposed on the character of the cause when it is included in its new context.

We must now examine the version of the Law of Causality assumed by modern science. The scientist postulates a deterministic universe in which the nature of everything is necessarily determined by its causes and similar groups of causes invariably have similar effects. The prestige of the scientific version of the Law of Causality has been so great that there is now a natural tendency to believe that the very meaning of causal connection is such that the nature of an effect is inexorably determined by the nature of its causes. But, as we have already pointed out,* all that is involved in the fundamental concept of causality is that an effect must be influenced and affected by its causes.

One reason why the scientific account of causality tends to seem so plausible is on account of the assimilation, implicit or explicit, of causal connection and logical implication. It is supposed that the relation of causality is a relation between things in the real world which parallels the relation

* above, p. 254.

of logical implication between things in the abstract realm of concepts and propositions. In the case of logical implication, a consequent is necessarily determined by its antecedent. But the character of this relationship in the static world of abstract ideas does not justify the conclusion that there is a similar necessary determination in the relations between antecedent and consequent in the dynamic world of real concrete substances.

We established that the relation between cause and effect depends on the activity of the effect and not on the activity of the cause,* and this is an extremely important result for anyone who wishes to challenge scientific determinism. If it were the causes themselves which were responsible for the synthesis of the characters which they contribute to the effect, then the nature of an effect would be necessarily determined in advance by the nature and activity of its causes, and the Determinist thesis would be incontrovertible. But since this synthesis depends on the activity of the effect, it may well be that, although the elements to be synthesised are determined by the past causes, the peculiar mode of synthesis employed depends on the freedom and initiative of the effect. This, however, does not prove that Determinism is false. For it is also possible that the nature of the synthetic product is completely determined by the nature of the elements synthesised. It may be that the mode of synthesis open to the effect is

* cf. above, pp. 250-253 and p. 278.

determined by the nature of the materials which it must incorporate. If the effect is compelled by its causal situation to adopt just one specific mode of synthesis, then Determinism will be true, notwithstanding the activity of the effect. But on the other hand, if the effect has a certain spontaneity and may choose between alternative ways of synthesising the elements contributed by its causes, then Determinism will be untrue.

The only way of deciding between these two possibilities is by referring to the empirical evidence. On the side of Determinism, the main evidence is the de facto regularity of nature. Scientific investigation and the successes of scientific prediction have shown that effects respond to their causal situations in a very regular and predictable way. But the evidence of regularity in nature is not sufficient to warrant the conclusion that the character of an effect is always necessarily and completely determined by its causes. Even if scientists discover a perfect regularity in the past history of the universe, successfully eliminating all cases where a possible irregularity might be suspected, there is no guarantee that this regularity will necessarily persist in the future. And in any case, scientists at present are very far from establishing that the regularity of nature is complete, even in the limited portion of the world process which is open to detailed scientific investigation. There is, indeed, an impressive regularity of behaviour in the phenomena studied

by the physicist and the chemist. But even in this case, it is possible to suggest that the regularity is partly due to the operation of statistical laws governing the behaviour of a mass comprising a very large number of individual beings, some of which may act in most erratic ways without disturbing significantly the behaviour of the whole mass. And in the sciences of biology and psychology, the regularity which has been discovered is by no means complete. There is, for example, no exact science of human behaviour which would make possible an infallible prediction of what a human being will do in a given set of circumstances. The failure of the scientist to predict with consistent success exactly what men will do does not, indeed, prove that human behaviour is undetermined and spontaneous: for the scientist may fail only because the situations are so complex that he cannot identify all the causal factors involved. But we are not maintaining that the shortcomings of scientific psychology make Determinism untenable: we are merely pointing out that the actual evidence of the regularity in nature does not establish that Determinism is the only possible or reasonable view.

The main empirical evidence on the side of Indeterminism is the evidence of the freedom of the human will. Every human being naturally believes that he is a free agent, that he does very often have the power of deciding between alternative courses of action, even although the lines of action possible in a particular situation may be severely restricted by the

environment. The plain man's intuitive conviction that he is a free agent with a real power of decision may, of course, turn out to be an illusion. It may be, as Spinoza suggests, that men consider themselves free only because they are ignorant of the causes determining their actions. Therefore, the common sense belief in the freedom of the will is by no means an insuperable obstacle to Determinism, and this belief may be disregarded if Determinism must be accepted on other grounds. But since the arguments by which Determinists support their thesis are far from conclusive, the natural belief in the freedom of the human will may be accepted at its face value as evidence in favour of Indeterminism.

Moreover, there is a much stronger argument for the freedom of the will which is based on the evidence of moral experience. There are two propositions which a moral agent cannot easily deny: first, that one has sometimes done what one ought not to have done: second, that one is under an obligation to do only what one can do--ought implies can. From these propositions, the conclusion follows that one is sometimes free to do what one does not in fact do. On occasion, one has a real choice between genuine alternatives. One may choose to do what duty prescribes; or else, one may choose to follow one's strongest desire. Some philosophers, e.g. Kant, have been so impressed by the evidence of moral experience that they have been prepared to exempt the moral will from the causal determinism which they suppose to govern

the rest of the universe. Therefore, the evidence of human freedom must be very persuasive in the case of those who do not believe that Determinists have established their thesis even with respect to the behaviour of things in the non-human world.

The best way to make clear exactly where we stand in the controversy, Determinism versus Indeterminism, is to consider briefly the initial paradox confronting those who tackle this problem. There are three principles which a preliminary examination of experience seems to justify; and yet these principles are not compatible--they cannot all be true. There is the principle that the human will is free. There is the principle that there is nothing in the universe in so special a position that it is not involved in the causal relationships which apply to other things. There is the principle that causal connection implies the necessary determination of an effect by its causes. The Determinists resolve the paradox by denying the first of these principles--the freedom of the will. But we have just seen how well substantiated this principle is. Many Indeterminists reject the second principle, maintaining that the moral will is not subject to the causal laws which reign in the rest of the universe. But this involves establishing in the universe a radical dichotomy between the things which are governed by causal law and the things which are not.

Our view is that there is no necessity to resort to

either of the above expedients; for it is the third of the incompatible principles which is false. This principle, that an effect is completely determined by its causes, is usually taken so very much for granted that it is not even explicitly recognised as one of the assumptions involved in the initial paradox. If this principle is rejected, then the freedom of the will is perfectly compatible with the doctrine that every real being is involved in causal relationships with its predecessors. We have argued that two beings are causally related if the cause affects and makes a difference to its effect. If one wishes to go further and claim that the nature of an effect is completely determined by its causes, one must produce the necessary evidence--and this evidence has not been forthcoming.

To summarise the account of causality which we believe to be correct, all beings are subject to causal conditioning and have to deal with data provided by their antecedent causes. But the way in which a being deals with these data is not determined by its causes. Every being has a certain spontaneity and it is responsible for the particular way in which it synthesises the elements contributed by its antecedents.

This theory of causality is extremely successful in explaining human action. We must notice that the phrase "human action" is ambiguous. It may be used to denote the sequence of events in the external world which follow upon the agent's act of volition. But it may also be used in a

narrower sense to refer only to the internal activity of the human subject. Everyone would agree that human action, in the wider sense, is subject m to causal conditions which set limits to what can be done, while at the same time the agent is free to choose between the alternative courses of action which are physically possible. For example, in a particular situation, a man might be free to walk north or east or west, but not to walk south, because of a stone wall which blocks his path. Determinists would, of course, maintain that this freedom possessed by the agent is merely nominal. The agent is said to be free because normally, he is not compelled by his physical situation to follow a certain designated course of action; but this does not mean that his choice between the physical possibilities is not determined by psychological factors beyond his control. To describe the situation in terms of the theory defended above, a human agent can influence the future according to the character of his own activity, because the character of the agent is an element which subsequent beings must incorporate. But a human agent has not an unlimited power to mould the future in accordance with his wishes, because of other causal forces operating in the environment which also supply data to be incorporated by subsequent beings. The freedom of action of a human being is limited, because he has no control over the contributions of his contemporary neighbours, which also help to determine the nature of the future.

But the peculiar virtue of our theory is that it can also allow the combination of freedom and determination in the case of the internal activity of the human agent. An agent does not have an absolute control even over the nature of his own activity. He is limited by the data contributed by his immediate past. A man cannot have the experience of seeing a red patch, unless his sense organs have just been stimulated in a certain way, nor can a man understand a passage from Homer if he has never learned Greek. But there is nevertheless a certain area within which the prerogative of free choice may operate. For the agent determines the particular way in which the data provided by antecedent beings are synthesised.

But although our theory of causality can explain how spontaneity and causal determination are combined in human action, can it explain the enormous de facto regularity which scientists have discovered in the rest of nature? How can the same account be stretched to cover both the activities of human beings, who show a good deal of initiative, and the behaviour of inorganic matter, which acts in a perfectly regular way? This is not a serious difficulty. Although all beings are involved in the same kind of causal relationships, and although in all cases, the synthesis of the contributions of the causes is determined by the activity of the effect, one can admit wide differences in the degree of originality and initiative possessed by the beings affected by antecedent causes. There are high-grade entities, such as human beings,

where the element of originality and decision in the being's response to his causal situation is very important. And there are also low-grade entities, such as the things studied by physics and chemistry, which lack the initiative to perform any but the most obvious syntheses of the data contributed by their causes. In the case of such entities, there is a very marked regularity of behaviour, so that it is very often possible, on the basis of past experience, to make an accurate prediction of what will happen in the future. But even in the case of entities of the very lowest grade, there is no necessary connection between the nature of a cause and the nature of an effect. And there are certain phenomena, even in the natural world, which the rigid system of scientific determinism cannot explain as conveniently as can the more flexible account of causal connection given above, e.g. the origin of life and the evolution of higher from lower forms of being.

Thus, there is no conclusive evidence that Determinism is true, even in the case of non-living beings, and an alternative explanation of the de facto regularity of nature is possible. And on the other hand, it is difficult to maintain that the iron rule of necessary determination holds good even in the case of the moral choices of human agents. It is, of course, possible to argue that there is a fundamental difference between the relations of conscious and unconscious beings respectively to their causal environments and to

distinguish causal relations which are compatible with freedom from causal relations which are not. But since the causal relation is the basic structural relation in the universe, one should avoid, if it is at all possible, the radical dualism involved in a distinction between different types of causal connection. It is better to assume that in all cases there is in principle a certain spontaneity, even if the degree of spontaneity actually exercised is often negligible.

V. This completes our account of the nature of causal connection, but before concluding the chapter, it must be pointed out that in this system, the causal relation has a much greater importance than it has in most other systems. Many metaphysicians have assumed the reality of enduring substances which maintain their identity throughout a number of passing states. These substances remain present for a period of time, perhaps for ever, although their various states come to be and pass away. We do not accept this account of substance, and we take as the ultimate substances the entities regarded on the other theory as passing states. Our view has the advantage of simplicity: the opposing theory must postulate the existence of two different fundamental types of particular being— the enduring substance and the transient state: and this gives rise to the problem of relating these two types of being in a satisfactory way. But there is another more important reason why we wish to challenge the conception of permanent

substances. The independence of substances may be reconciled with their interrelatedness only if there are no real direct relations between contemporary beings.* Now, if substances are permanent things which persist through time, one cannot easily deny that contemporary substances are often interrelated. For example, if two enduring material objects are in collision, they are obviously related and affect one another. One can defend the view that there are no direct relations between contemporaries, only if one is prepared to break up each common sense material object into a series of ephemeral substances.

Now, if one denies the reality of permanent substances, one must use causal relations between past and present to explain the phenomena which others would attribute to the persistence of substantial beings. In the case of a human person, for example, there is a massive identity in character between two states which are not widely separated in time. If a human person were a single enduring substance, then this identity in character would be explained by the identity of the substance. But since the human person is a series of transient substances, this identity in character must be explained as resulting from the causal relations between different terms in this series. We are able to give a plausible explanation of the very great similarity between contiguous terms in such a series because of our doctrine that the character of a cause persists in its effect in a modified

* cf. above, pp. 201-202.

form. In this case, the degree of modification is very slight.

It is natural to feel that this analysis does not do justice to the identity of an enduring being such as a person. One feels that the identical self which persists throughout the vicissitudes of life is something very much more than can be explained by a theory which breaks up the self into a series of causally related substantial states and which must reduce the identity of the self to the repetition of the same universal character. One feels that the identity of the self is something more concrete than the abstract identity of different instantiations of the same universal. But this feeling is duex to a misconception of the nature of the universal. The universal is often regarded as something rather abstract because one thinks of it as a universal concept. But although the universal is the ground which justifies the formation of general concepts, in this system it has another function--and a more important function. The universal is the element of permanence in the universe. It is an entity which may survive the disappearance of any particular substantial being in which it is incorporated. Therefore, one should not reject the above analysis because one feels that the universal is not adequate to perform the role assigned to it. Instead, one should revise one's idéa of the universal.

The situation is briefly this. There is an element which is responsible for what is permanent amid the flux of

the universe. It is this same element which is the objective ground of general concepts. We can understand the nature of this element only by considering its functions. We have no *a priori* knowledge of what a universal must be like. Any preconceived idea which would lead one to suspect that the universal is not competent to perform its various functions is derived from an inadequate and incomplete examination of these functions--from an undue emphasis on the role of the universal as the foundation of general concepts. One cannot deny that the universal is sufficiently concrete to carry the weight of explaining, for example, the identity of the self, for the only way of assessing the degree of concreteness possessed by the universal is by considering the concreteness of the identities in difference which it is invoked to explain.

CHAPTER EIGHT.

EXPERIENCE.

I. The main purpose of this chapter is to re-examine the epistemological problem discussed in Chapters II and II in the light of the metaphysical theory developed in the last few chapters. In Chapter II and Chapter III, we argued that there is no need to abandon, in the face of epistemological criticisms, the common sense belief that the experiencing subject experiences independent objects beyond himself. In the following chapters, we moved from epistemology to metaphysics in order to answer the objections that the experiencing subject and the objects experienced cannot be independent substances. The common sense belief cannot be defended unless one can establish a system of metaphysical pluralism--a system which reconciles the plurality of substances with their interrelatedness. But the development of a coherent pluralist system merely satisfies a necessary condition which must be satisfied if one is to maintain that an independent substance may experience other independent substances: there remains the problem of showing that substances are related in such a way that it is in fact possible for one substance to be experienced by another.

This remaining problem, however, is by no means as formidable as it may appear, since the basis for its solution has already been provided by the particular metaphysical theory

sketched in the preceding chapters. In Chapter VI and Chapter VII, we established the existence of a direct relation which is the fundamental link connecting different substances in the one universe without destroying their independence. This relation is responsible for the generation of the temporal continuum, and it also enables one being to have a causal effect on other beings--in one aspect, it is the relation of causal connection. Now, all that is necessary in order to prove that an experience of external beings is possible is to show that it is legitimate to identify the relation between experiencing subject and experienced object with the fundamental relation whose existence has been already established.

A metaphysical system which assumes only one kind of direct relation between independent beings in order to explain the source of the temporal series, causal efficacy, and the experience of external beings, is clearly in a strong position on account of its extreme simplicity and coherence. But the economy of this system will not save it, if it is inadequate to the facts and confuses relations which are demonstrably different. Therefore, we must now consider several objections to the identification of the relation between the experiencing subject and the object experienced with the relation between cause and effect. If these objections can be sustained, it will follow that the "experience" relation is also different from the trans-temporal relation connecting independent substances, with which the causal relation was identified in

the previous chapter.

But before examining these objections, let us first point out that the causal relation and the relation between experiencing subject and experienced object have the same fundamental structure. Both relations are internal-external relations. Both relations make a difference to one of their terms and not to the other. The causal relation makes a difference to the effect, but not to the cause. And when one being experiences another, the relation between them makes a difference to the experiencing subject, but not to the object experienced. A being is modified by its experiences, but experience does not change its object.* Thus, the relation of experiencing and the relation of causality are similar in structure, the experienced object corresponding to the cause and the experiencing subject corresponding to the effect. An effect is affected by its causes, and the experiencing subject is affected by the external objects experienced.

But in spite of this underlying basis of similarity, there are certain apparent differences between experiencing and causality which must be removed if one is to assume the identity of these two relations. One important objection against

* This can be challenged only by those who fail to make a clear distinction between the content of experience and its external object. The content of experience, as we showed in Chapter II, is subjectively conditioned and is affected by its relation to the experiencing subject. But experience has also an external object which, as we normally believe, is not altered when it is experienced.

the identification of experiencing and causality has been answered, in effect, in the preceding chapter. When one being experiences another, the active partner in the relationship is the experiencing subject and not the experienced object. This means that one cannot identify experiencing and causality if one accepts the common sense belief that, in a case of causal connection, it is the cause which is active and not the effect. But we have shown that this common sense belief is mistaken and that causal relations really depend on the activity of the effect.*

The principal objection remaining against the identification of causality and experiencing is that one seems to experience what is contemporary, whereas a being is causally affected by what is in its past. Experience, it would seem, is by definition experience of what is present: any awareness of what is past is not experience proper, but memory. But the evidence that the object of experience is contemporary with the subject is not conclusive. It may be that the common sense belief that we experience contemporary objects is mistaken and depends on an illusion. The plain man does not make the sharp distinction revealed by analysis between the content and the object of experience. Now, the content of experience is certainly contemporary with the experiencing subject, since it is an element in the constitution of that substantial being. Therefore, if one confuses the content and object of experience, one may have the illusion that the object is also contemporary

* cf. above, pp.250-253.

with the subject, even if this is not the case. Moreover, on account of his practical interests, an experiencing subject is generally concerned, not simply with the characters of the ephemeral beings which he directly experiences, but with features which are likely to persist in the external world for some time. Even if the evidence for the existence of these features is provided by the immediate past and not by the present, this fact may very well escape the notice of an experiencing subject who, in virtue of his practical concerns, is orientated towards the future.

This argument does not, of course, establish that the object experienced is not contemporary with the experiencing subject. It merely explains how it would be natural to believe that the object and subject of experience are co-present, even if this were not the case, and therefore it shows that the actual existence of such a belief is not inconsistent with the hypothesis that the subject in fact experiences only beings in his past. But if it is at all possible to reject without implausibility the plain man's belief that he experiences contemporary beings, it is surely advisable to do so. For if this belief is accepted, not only will it be necessary to construct a more complicated system, it will also be necessary to reject a belief which the plain man would be equally reluctant to abandon--the belief that the experiencing subject and the experienced object are independent beings. For the independence of beings can be reconciled with their

interrelatedness, only if the related beings are not contemporary.*

There is, moreover, a certain amount of scientific evidence confirming that the objects which we experience are not always contemporary beings, as we naïvely suppose. There are certain exceptional cases where an object which the plain man supposes to contemporary can be clearly shown to be in the remote past of the observer. When we look up at the heavens, we naturally suppose that we are seeing contemporary stars. But astronomy has shown that the observer does not witness what is going on at present, but only what was happening a long time before. Now, if the plain man is mistaken in this case, one may reasonably suspect that he is mistaken in all cases, when he supposes that the beings which he experiences are his contemporaries. In the case of terrestrial observations, indeed, the temporal gap between the time of an event and the time of its observation will be very small, and for practical purposes negligible. But so long as there is a gap, however small, the plain man will be the victim of an illusion when he supposes that he observes what is going on at the present time.

Thus, one cannot reject the identification of the relation of causality and the relation of experiencing on the ground that in the case of experiencing the terms are contemporary, whereas in the case of causality they are not. There is, however, another objection to this identification

* cf. above, pp. 201-202.

which we must now consider briefly. One may argue that it is impossible to assimilate a relation like experiencing, where one of the terms must be a human being or at least one of the higher animals, to a relation like causality, which connects even the most primitive of beings. If causality and experiencing are the same, it should be legitimate to say, for example, that one atom experiences another--but this is an extremely odd use of language.

This objection draws attention to a valid, though obvious, point--that a low grade entity, such as an atom, cannot experience other beings in exactly the same way as a conscious subject experiences the world around him. Atoms do not have that consciousness which we experience in ourselves and which we are reluctant to admit even in the case of the higher animals. But this does not disprove the main principle which we wish to defend, that the relation of experiencing is fundamentally the same as the relation of causality. Granted this fundamental identity, we are willing to admit very great variations in the relation when it is established by the activity of a human being and when it depends on the activity of a being of very low grade. A human being may respond to his causal situation by a conscious experience of the beings which affect him, but such a response is beyond the power of atoms and similar entities. It is perhaps best to say that experiencing is a particular form which may be taken by causal connection in a case where the effect is a high grade organism.

That is, experiencing is one specific type of causal connection, although there are other cases of causal connection which it is not appropriate to call experiencing. But if one adopts this terminology, one should bear in mind that it may be impossible to draw a hard and fast line between those cases of causality which are properly classed as experiencing and those which are not. One should also remember that causality in general has one characteristic (and there may be others) which we would normally ascribe to experiencing and not to causality. In causal connection, the relation depends on the activity of the being which is affected.

Since it is both possible and plausible to identify the relation of experiencing with the relation of causality and hence with the fundamental transtemporal relation between independent substances, we have vindicated, in terms of our general metaphysical system, the plain man's belief that he experiences external objects. The general answer to the problem, "How is it possible for one being to experience another beyond itself?" is that such an experience is possible in virtue of the relation which must exist between them if they are to be together in the same universe.

II. Thus, the identification of causality and experiencing enables one to justify the common sense belief that there are external beings. This identification also makes possible the justification of another common sense belief, that we have

some knowledge of the nature of these external beings. We shall now proceed to a discussion of this point.

Although we know the existence of external things by a direct intuition through our contact with them, it is not easy to defend a similar direct intuition of the detailed nature of external things. Therefore, if we have any knowledge of the character of the external world, it must be through the contents presented to consciousness. We naturally suppose that the sense-contents given in immediate experience do provide us with information about the external world. For example, when a red sense-datum is presented to consciousness, we assert straightaway, unless there are special reasons for caution, that there is a red object in the external world.

In the second chapter, it was conclusively established that the contents given in consciousness are not, as such, objective qualities of external things--Naive Realism is an untenable view. Therefore, if sense-contents supply evidence with respect to the characters of external beings, this must be in virtue of some relation which connects the sense-contents with the external things. According to the Theory of Representative Perception, this relation is the similarity of the subjective sense-contents and the objective characteristics of the things in the world. Now, we noted, again in the second chapter*, that, on account of mediating conditions and the subjective conditioning of the content of

* cf. above, pp. 38-39.

experience, the presented sense-contents are often very different from and may never be very similar to the objective qualities of the external things concerned. We could not, indeed, rule out categorically the possibility that the subjective and objective elements are sometimes very similar in character, but it is quite clear that normally, any supposition that the character of an external being closely resembles a presented sense-content is extremely precarious.

The only other possibility is that the relation between the content and the external object is the relation of causality. If this is so, the contents presented to consciousness will supply us with information about the external world, referring us to the causes which are responsible for their production. Now, the contents presented in consciousness are elements in the constitution of the experiencing subject; for they are not objective features of external substances and they must be incorporated in some substantial being, if they are to exist at all. We have seen that the relation between experiencing subject and experienced object is the relation of causality. Therefore, sense-contents <u>are</u> the effects of external causes, and from the presentation of a certain sense-content, one can infer that there is in the external world a being with the power to produce that sense-content in the consciousness of the experiencing subject.

Thus, the nature of an external being may be inferred from the nature of its effect on the experiencing subject,

which is the specific content presented to consciousness. The contents immediately before the mind yield information about the external world because they bear witness m to the nature of the external powers which are responsible for their production. This means that our knowledge of the nature of the external world is much more limited than we normally believe. We have no knowledge of the intrinsic characters of the things in the world: we cannot say that they actually possess the qualitites immediately present to the mind, but only that they have the power, in suitable circumstances, to produce such qualities in the consciousness of an experiencing subject. For example, we cannot say that sulphur in and by itself possesses the property of yellowness: all that we are strictly entitled to say is that sulphur, when illuminated by a suitable light, has the power to produce a yellow sense-content in the consciousness of a person with normal vision. Our knowledge of the external world, however, is not confined to a knowledge of the powers of external beings to affect directly the consciousness of human percipients: we have also an indirect knowledge of the powers of external beings to affect other things in the world. We can detect the existence of such powers by registering the change in the effect which the affected being has in its turn upon the normal human observer. For example, we know that acids have the power to affect litmus paper, because, after being in contact with an acid, the litmus paper produces a sensation of red in a person with normal

vision instead of the sensation of blue which it produced before. The construction of a systematic science depends on the possibility of recognising in this indirect way the exercise of power in the natural world.*

Thus, the percipient subject's knowledge of other things is severely limited on account of his external point of view. He has no insight into the internal natures of the things in the world. But this limitation of human knowledge, although disappointing to the speculative thinker, makes little difference for the purposes of practical life and scientific prediction. It is possible to know the powers of external things and to know how we are likely to be affected in the future and this is all that need concern us. All that scientists can do is to identify the various powers of the things in the world: they cannot discover what these things are really like in themselves. This explains why the entities to which scientific theories refer -- atoms, sub-atomic particles, electrical forces and the like -- seem so mysterious to the plain man. The plain man is expecting an explanation of these entities which will compare them to contents presented in consciousness, and this explanation cannot be given, since the scientist has no justification for claiming that these entities are similar in character to any sense-data, and he can identify them only by their powers to affect other things.

* This is no more than a rough and preliminary sketch of a view which will be examined in greater detail below.

It will be clear that the theory of perception outlined above is a version of the causal theory. The causal theory of perception is attractive and plausible, once the defects of Naive Realism and the Theory of Representative Perdeption are recognised and once the evidence of physiology is given due weight. This was the theory accepted by Locke, although Locke was willing to compromise with the Theory of Representative Perception in the case of the ideas of primary qualities.*

But in spite of its apparent plausibility, the causal theory of perception, as stated by Locke, was not accepted by Hume and most modern empiricists, because it was exposed to a simple but fatal objection. Locke argues that all simple ideas "must necessarily be the product of things operating on the mind."** But how can he justify this inference from the given idea to the external cause which is supposed to produce it ? Locke is not entitled to assume the Principle of Causality which he employs. If the mind has "no other immediate object but its own ideas"*+, then one cannot extract from these ideas a principle which will enable one to infer to transcendent causes which produce them. The concept of causality can refer only to the regularities of sequence in the ideas presented and the principle of causality can be used

* Our account of the powers of external things to affect directly or indirectly the consciousness of a human being is very closely parallelled by a passage in An Essay Concerning Human Understanding, Book II, Chapter xxiii, 10.

** op. cit., Book IV, Chapter iv, 4.

*+ op. cit., Book IV, Chaoter i, 1.

only to predict what ideas will be presented in the future. If the mind has a direct awareness of nothing but its own ideas or sense-presentations, then one cannot escape by inference from the closed circle.

But the argument which refutes Locke's version of the causal theory does not damage the theory to which we subscribe. For we do not attempt to infer the existence of external causes from the sense-contents presented to consciousness. We do not require to make use of such an illegitimate procedure because we do not restrict the immediate experience of the subject to the given ideas or sense-data. We maintain that the subject has an immediate awareness of external and independent beings beyond the contents appearing in consciousness. Moreover, in virtue of the identification of experiencing and causality, the subject is causally affected by the beings which he experiences. It is this primitive awareness of external beings which is the true source of the concept of causality. It is not necessary to extract a principle of causality from the regularities of sequence in the sense-presentations. The existence of evidence concerning the nature of causality which is derived from our immediate contact with external things explains our instinctive dissatisfaction with the view that causal connection is no more than regularity of sequence.

* Professor R.I. Aaron argues that Locke himself would answer his critics in a very similar way (cf. R.I. Aaron, John Locke, Chapter VII, Section III). Aaron maintains that, although in some passages Locke's explicit doctrine is that we know

Although we have now answered the main objection to the causal theory of perception, other difficulties remain. We normally believe that we know a good deal about the nature of the external world. But how is this knowledge possible and how is it to be justified? We are certainly entitled to say that the sense-contents presented to consciousness are generally the effects of beings in the external world. But the bare knowledge that there are external causes responsible for the production of the content of consciousness reveals nothing about the detailed character of external things. A little more is known if one admits the plausible supposition that the different features in the content of consciousness are for the most part the effects of different qualities of different external beings. For example, our visual sense-data are organised in a visual sense-field, and one may plausibly claim that the structure of the visual field corresponds, to some extent, to the structure of the external reality and that different areas in the visual field are the effects of different areas in the outside world.

But even if one admits that there is justification for distinguishing different powers of external beings correlative

directly only our own ideas and must infer to the external things responsible for the production of these ideas (e.g. in the Essay, Book IV, Chapter iv, 4), in other passages Locke suggests that we know directly the existence of external things by sensation (e.g. in Book IV, Chapter xi, 1-2). Even if one does not agree that Locke seriously accepted a view in so startling a contradiction with his main thesis, one may agree that this is the sort of thing Locke should have said.

to the different effects discovered in consciousness, our knowledge of the nature of the external world will be neither extensive nor of any use for practical purposes. If one's knowledge of the outside world is to be of any importance, one must find some basis for inferring other properties of an external being in addition to the property of affecting one's present consciousness in a specific way.

Now such inferences are possible because the universe is not a mere aggregate of unrelated entities. On the contrary, the Principle of Causality established in Chapter VI states that everything in the world is causally connected with other beings. In virtue of the causal interconnections of the things in the world, we can infer from the nature of the beings which are affecting us at present the nature of other beings, e.g. the beings which will affect us in the future.

Inferences based on causal connections, however, do not have the secure justification which they would have if we were able to accept the Determinist account of causality. But although there is no strict and necessary Law of Causality which will permit one to <u>deduce</u> the nature and powers of one being from the nature and powers of another being, nevertheless, our analysis of causality does show that there is likely to be a good deal of order in the universe. In the first place, we found that an effect must reproduce the character of its cause.* This character may, indeed, undergo a certain

* cf. above, pp. 260-263.

transmutation when reproduced by the effect, but it is probable that in many cases this transmutation either will not occur or will not be very radical. Thus, it seems quite likely that the beings in the world will have successors which, in the main, will preserve their characters. Secondly, even when the character of x the cause is substantially altered when reproduced by the effect, it seems probable that this alteration will not be completely arbitrary. The main reason why the character of a cause is not exactly reproduced by its effects is that the effect is often compelled to synthesise characters contributed by several different causes. These characters cannot be brought to a real unity without being changed in the process. Now, although the particular mode of synthesis is determined by the effect and although it is in principle possible for the effect to choose between alternative ways of synthesising its data, nevertheless it seems very probable that in most cases effects which are presented with similar data will synthesise them in a similar way.

Thus, one can say a priori that there is likely to be a fair measure of constancy in the character of the world--things will not change much from day to day. Also, the changes which do occur will generally follow a regular pattern--similar combinations of causes will produce similar changes. But these a priori considerations are very far from justifying the degree of reliance which we actually place on the regularity of nature. We feel extremely confident that in the future

things will remain much the same as they were in the past and that any changes will be in accordance with regular laws. The reason why this is so is that we have, in fact, discovered such a regularity in past experience. The predictions which we have made, assuming the regularity of nature, have been remarkably successful, and the success of these predictions confirms the truth of the assumption on which they depend. Mistaken predictions can usually be attributed to our ignorance of the causal factors involved rather than to any irregularity in nature. Thus, the main justification for the belief that nature will be regular in the future is the regularity actually discovered in the past.

The regularity which we have found in past experience does not, indeed, provide a foolproof justification of any inference with respect to the future. Any prediction which we may make is certainly fallible. But we have good reason to believe that, for the most part, things will not behave in unprecedented ways.

It is sometimes argued that the actual regularity of the past does not entitle one to assume the regularity of the future, since there is no rational basis for the belief that the future will resemble the past. We are in a better position to reply to this argument than are those who reduce causal connection to a phenomenal regularity of sequence, attempting to infer the regularity of what will be presented in the future from the regularity of phenomenal presentations in the past. For in

terms of our metaphysical system, there is a justification for assuming that the future will be like the past. It is a general metaphysical principle that whatever comes to be must be causally related to what is already in existence. Therefore, the future will resemble the past at least in this--it will be subject to causal conditioning by its antecedents. We cannot say, indeed, that the causal connections in the future will necessarily follow the same pattern as in the past, but since their general structure will be the same, it does not seem likely that there will be any radical alterations in the laws which have held good hitherto.

III. We have now shown that the sense-data presented to consciousness are, in general, the effects of beings in the external world and that the regularity of causal connections supplies a basis which makes it possible to infer the other powers of these external beings. If our arguments are correct, we may claim that we have solved the fundamental theoretical problems concerning the knowledge of an external world beyond the given sense-contents. There remain, however, many unresolved difficulties with respect to points of detail. We cannot hope to deal with all epistemological problems in the detail which would be necessary, but we shall now discuss briefly some of the most important.

A good way to approach several epistemological problems is to attempt an analysis of common sense statements about the

external world. To take a simple example, what is the proper analysis of an assertion like "This object is brown"? One can hardly maintain that such an assertion attributes to the external object the brown content given in consciousness. If one accepted this analysis, one would be forced to admit that all, or nearly all, common sense statements about the outside world are false. For investigation has shown that sense-data must be normally very different in character from the qualities of the external beings which produce them.*

The kind of analysis which we hope to provide is not a simple translation of what is explicitly meant by a particular common sense statement. In many cases, when the given statement is clear enough, no such translation would be helpful; and even when a translation would clarify what was meant, we would still be left with a common sense statement which, although clear at the level of common sense, would yet be philosophically obscure. What we are attempting, rather, is to elucidate what is implicit in common sense statements. To put it in another way, we are trying to show how a philosopher who is aware of epistemological problems, must rephrase common sense statements, if he wishes to be absolutely precise: the philosopher must explain how common sense statements must be re-interpreted, if they are to be true, when normally thought true.

In the light of what has been said above, the most obvious analysis of common sense statements about the world

* cf. above, Chapter II, and pp. 301-302.

would seem to be this. Statements like "This object is brown" should be translated "This object has the power to produce brown sense-data in the experiencing subject". We cannot know the internal characters of other beings. Our only knowledge of their nature is that they possess certain powers to affect the experiencing subject. These powers may be detected by the way in which the subject is actually affected--by the character of the sense-data presented to consciousness.

Similar analyses can be given in the case of more complex examples such as "This object is a cat". Such statements are to be translated as follows: "This object has the powerm to produce in the experiencing subject various sense-data of certain (specified) kinds." In this case, the power possessed by the object in question is a complex power. It is perhaps more accurate to say that the object possesses a group of powers to affect the experiencing subject in more or less specific ways: it has the power to produce specific visual sense-data, it has the power to produce specific tactual sense-data and so on. We do not specify exactly, the sense-data which must be produced by an object properly classified as a cat: some variation is permissible, but the sense-data produced must fall within certain limits if the proposed classification is not to be rejected. The fact that these limits are rather vague is of little practical importance, since one so rarely encounters borderline cases.

An extremely important point which must be noted in

connection with this example is that what is being asserted is that the object is a material thing of a particular kind. The assertion is not merely that there is an external being which at present possesses certain powers: there is also an implicit claim that the being in question has a history and is likely to have a future. When one says that this object is a cat, one implies that the thing was once a kitten and that it will continue to be a cat unless it is destroyed by some accident. The common sense belief is that material things can maintain themselves in existence in spite of the passage of time, so that statements asserting the existence of a material object of a particular kind can be readily verified or proved false by future observations.

Now, in the previous chapter, we argued that the real substances in the world are ephemeral beings which do not persist through time.* Therefore, if material objects are taken to be enduring substances, all common sense material object statements must be false. If one is not prepared to accept this conclusion, one must provide an alternative account of the facts which material object statements are used to describe. This account may be offered as the correct translation of the common sense statements.

The plain man supposes that there are enduring substances in the physical world because certain characters and groups of characters constantly reappear. Now, the real reason why

* cf. above, pp. 289-291.

these characters reappear is that there are in the world certain chains or series of causally connected substances, where each member reproduces, in general, the character of its immediate antecedent. When the plain man asserts the existence of a material object, such as a cat, he must be taken to refer, not to an enduring substance, but to one of these chains. If material object statements are analysed in this way, they will not necessarily be false. They will be judged true or false according as the empirical evidence confirms or disproves the existence of a causal series of the kind in question.

To return to the main argument, it seems very plausible to maintain that a statement like "This object has the power to produce brown sense-data in the experiencing subject" is the philosophically accurate translation of the common sense statement "This object is brown". But this translation has one serious weakness. The translation will be imprecise, unless one can specify the conditions in which the power will actually be exercised. To establish this point, one must reflect on what is meant by saying that an object possesses a certain power. A thing has a specific power, when it will produce a specific effect, if certain conditions are fulfilled. If one supposes that the being in question is a free agent, then one might say that the condition to be fulfilled is that the agent should decide to exercise his power. But in the case of most beings in the external world, one makes no such supposition. In such cases, the conditions to be specified

are the other beings in the world whose co-operation is required in order to produce the effect in question.

There would be no need to specify particular conditions, if every external being automatically produced its characteristic effect on every subject by which it is experienced. All beings would exercise certain powers in all circumstances and under any conditions. But the world is not so simple as this. For example, a brown object does not always produce a brown sense-datum in the experiencing subject. If the circumstances are unfavourable, e.g. during the hours of darkness, or if the observer is abnormal, e.g. if he is colour blind, the usual sense-datum will not be produced.

Therefore, if one wishes to give an accurate translation of the statement, "This object is brown", one must say "This object will produce, in suitable conditions, a brown sense-datum in a normal experiencing subject." But again there is a difficulty. What do we mean by "suitable"conditions, and what do we mean by a "normal" observer? It is certainly possible to specify some cases in which the conditions are unsuitable and the observer is abnormal. But on any particular occasion, one can never be sure of making an exhaustive list of the circumstances which are unsuitable or of the possible abnormalities in the observer. Moreover, in specifying inappropriate conditions when the external being will not produce its usual effect, it is necessary to refer to the character of other external beings. Since the character of

these beings also cannot be known directly, but only through their effects on the experiencing subject, the original problem of guarding against abnormal conditions recurs.

Thus, the above translation meets with exactly the same difficulties as the Phenomenalist translation discussed in Chapter III.* The statement "This object is brown" is not logically equivalent to the statement "This object will produce brown sense-data in the experiencing subject, granted certain specified conditions." No matter how detailed is the list of conditions, it is always possible that something has been left out. Therefore, we can always conceive of the possibility that the original statement "This object is brown" is true, although its supposed translation is false. This proves that the original statement and its translation do not mean exactly the same thing.

Since the attempt to analyse common sense statements about the world by using the conception of "power" has broken down, we must consider again what is the most straightforward analysis of all, that the concept used in the predicate of a common sense statement refers to a quality which the statement attributes to the external object in question. In the case of "This object is brown", the concept "brown" refers to the brown quality which is attributed to the subject of the proposition. The reason why we originally supposed that such an analysis is wrong is that the concept "brown" refers to the brown quality of certain sense-data immediately given to

* above, pp. 83-84.

consciousness. Now, since it is so very difficult to defend the belief that the characters of external objects are identical with the characters of the given sense contents, it seems that if one accepts this analysis, one is forced to admit that all common sense statements about the world are almost certainly false.

But this objection makes an assumption which is open to question. It assumes that because the concept "brown" indisputably does refer to a specific quality possessed by certain sense-data, the concept must refer to this quality when used in judgments about the external world. But is it not possible that the concept "brown" is ambiguous and that there is a systematic ambiguity in the case of all similar concepts? The fact that the concept "brown" refers on occasion to the brown-ness of sense-data does not in itself rule out the possibility that, on other occasions, it refers to another quality.

Therefore, if one is unwilling to admit that all common sense statements about the external world are mistaken, one must interpret these statements in such a way that the predicate concept refers to a quality different from that to which it refers when used to describe the content of immediate experience. It might be said that this interpretation is not simply an analysis of what is already implicit in the common sense statement, but rather involves a correction of a systematic error inevitable at the level of common sense. We would

answer that the function of common sense statements about the world is to identify external objects for practical purposes: the plain man does not commit himself to the assertion that the characters of external things are identical with the qualities presented to consciousness. This is not, however, a point of the first importance for our general epistemological theory. Whether or not one accepts our view of the matter will depend on whether one accepts the earlier argument that the plain man cannot properly be said to be a Naive Realist.*

What is of greater importance is to determine ~~xhmx~~ the nature of the qualities denoted by the predicate concepts of common sense statements, if these qualities are <u>not</u> the qualities presented in immediate experience. It is clear that we have no knowledge of what these characters are in themselves. All that we have at our disposal is evidence which suggests that external beings sometimes have the same qualities** and sometimes have different qualities, the evidence being the effects which these external things have upon our consciousness. This means that statements about the world like "This object is brown" are meaningless in isolation and can be neither true nor false. Significant statements about the world must be of the form "This object X has the same quality as this other object Y." We have often

* cf. above, pp. 15-16.

** We can maintain that different individuals may share the same qualities or characteristics because we accept the reality of universals. Cf. above, pp. 262-264.

very good reason to believe that some such statements are true and that others are false, although we can never be absolutely sure that we are right.

This is a very surprising conclusion. How can one deny that statements like "This object is brown" are meaningful and may be either true or false? The answer to this problem is that in actual practice, such statements are not really isolated: they form part of our systematic knowledge of the external world and implicitly refer to other judgments. In the course of experience, one notices certain identities in the contents presented to consciousness and one supposes that there are corresponding identities in the external world. In order to handle these identities in a convenient way, one makes use of concepts by means of which one refers to the character of all beings which are identical in a certain respect. Because objects A, B, C, D all produce brown sense-data in one's consciousness, one believes that they are all identical in this respect and one refers to their common quality by means of the concept "brown". Therefore, one is entitled to say "A is brown", "B is brown" and so on. Now, suppose that one discovers evidence which suggests that one of these objects, say D, does not, in fact, have the same quality as the rest. For instance, one might discover that object D, which originally produced brown sense-data, does so no longer: the only reason one can find for the change is that the object has been moved away from an unusual artificial light into the natural light

of the sun, where the other objects were observed. One would then claim that the statement "D is brown" is false. It might seem that this claim is illegitimate--that all one is strictly entitled to claim is that the statement "A, B, C, D share a common quality" is false. But so long as the group of beings, whose identity in character gives meaning to the concept, is not substantially disrupted, one is entitled to victimise the odd man out and to say that a statement is simply false if it predicates "brown" of a being which has been discovered to be different from the other members of the group.

Thus, colour concepts and other similar concepts do not necessarily refer to the character of the data given in immediate experience. Some confirmation of this doctrine is provided by the fact that colour concepts may be used quite correctly by men who are blind or colour blind and who have never experienced the colour qualities directly presented in the consciousness of normal observers. Granted, a blind man must depend on other people for the information which makes it possible for him to say when external beings are identical in colour, but the point is that a blind man does not find an assertion like "This object is brown" meaningless, although he has no experience of the quality to which the predicate concept sometimes refers. This proves that a concept like "brown" is not always used to refer to a quality given in immediate experience.

The original analysis of statements where the predicate

concept is more complex, e.g. "This object is a cat" must also be revised. For the meaning to be given to complex concepts like"cat" depends on the meaning given to simple concepts like "brown". The statement "This object is a cat" asserts that the thing in question is similar to certain other external beings. These similar beings are similar in a number of specific ways and not just in one way. They share, not one, but several common qualities. Just as simple concepts are used to refer to all beings which share a single common quality, so complex concepts are used to refer to beings which share a group of common qualities. We saw that the assertion that an object has a certain quality, such as brown-ness, is meaningless in isolation. Therefore, the assertion that an object has a certain group of qualities and is a cat is also meaningless in isolation. But in the context of one's experience as a whole, the statement "This object is a cat" is meaningful and may be either true or false. So long as there is a group of beings identical in the respects in terms of which the concept "cat" is defined, one may legitimately claim that an assertion "This object is a cat" is false, if one has reason to exclude the object in question from this class.

This x is a very rough and incomplete account of the way in which the predicate concepts function in common sense statements about the external world. But we must now turn our attention to the subject terms of such propositions.

How does one specify the particular subjects to which one attributes the various qualities denoted by the predicate concepts? One very often specifies the subject of a particular proposition by using the other qualities of the thing in question. For example, in the case of the assertion "This table is brown", one can identify the subject because one knows that it is a table, possessing the defining characteristics of a table. But ultimately, the subject of a proposition cannot be specified in this way. In the first place, this method will not single out the unique individual subject. There are, for instance, many tables in the world, and to say that the subject is a table does not indicate which table is meant. Secondly, one can identify the subject of a proposition by its other qualities, only if one accepts the assertion that a certain thing possesses these other qualities, and the subject of <u>this</u> assertion must be identified in some other way.

Ultimately, one specifies the subjects of propositions about the external world by means of a spatio-temporal framework within which one locates the things in question. One may use this spatio-temporal system even if one does not pin down the exact position of the subject of the proposition. For example, when one says "This table is brown" without saying exactly where the table is, one implies that it is nearby. The "this" has the force of "here-now". The statement means, in effect, "There is in the immediate vicinity an object possessing the characteristics of a table and this object is also brown."

So long as there is only one such object in the immediate vicinity, the subject of the proposition has been specified quite unambiguously.

Thus, the problem of specifying the subjects of propositions resolves itself into the problem of justifying the spatio-temporal order in which we arrange external beings. We discover a spatial order in the external world by assuming that there is some correspondence between the organisation of the sense-content given to consciousness and the organisation of the external reality. By comparing different observations, by checking one sense against another, and by using measurement techniques, we are able, as we explained above*, to remove distortions due to abnormal conditions or the particular perspective of the experiencing subject.

Such techniques are practicable and successful because the character of the external world is relatively stable: its various features reappear in much the same spatial relationships as before. And it is the actual success of these precedures which confirms the truth of the original assumption of a correspondence between the structure of the given content and the structure of the external world. The original assumption, although by no means unreasonable, was merely suggested by the evidence at our disposal before the assumption was tested in practice. The temporal order in the universe is discovered in a somewhat similar way, and we shall discuss it later when

* pp. 43-45.

dealing with memory.

We have been dealing mainly with the general theoretical difficulties concerning our knowledge of the external world. We have shown how we can know that external beings exist and affect our consciousness. We have shown that, in view of the rggularity of nature, we can infer how outher beings will be affected by the beings which affect ourselves. And we have analysed common sense assertions about the external world, explaining the function of the predicate concepts and showing how their subjects are specified. We must now discuss the main practical difficulties in the way of identifying the external beings responsible for the nature of the contents presented to consciousnese.

IV. The first difficulty is that many of the contents which we find in consdiousness are produced, not by any external being, but in virtuxe of the past history of the experiencing subject himself.* When there is no external cause, we call our experience memory or imagination. We can usually tell when contents are not to be attributed to external causes. There is a discernixble difference between what we imagine and what we perceive, as may be discovered on introspection. But occasionally, one may make a mistake. When one supposes that a figment of imagination is due to something in the external

* Strictly speaking, the past states of the experiencing subject are external beings from the point of view of its present state. cf. above, pp. 289-291.[1]

world, one is said to be suffering from a hallucination. In an abnormal state, an imagined content may acquire the vividness etc. usually possessed by contents produced by external causes, and one is deluded into attributing an external origin to an imaginary product. Now, although hallucinations are extremely rare, there is always the possibility, in any particular case, that we are mistaken when we suppose that our sense-data have been produced by external beings operating on the senses in the normal way.

There are, however, certain tests by means of which one can detect hallucinations and correct one's original mistake. For example, Macbeth suspects that the dagger which he sees before him is "but a dagger of the mind", because he is unable to feel and catch hold of it. But no such tests can be absolutely conclusive, and although in many cases it is extremely unlikely that we are mistaken, the possibility remains.

The second difficulty is more important. Even if one is correct in assuming that certain sense-contents have been produced by external beings, how can one be sure of identifying the particular beings responsible? We naturally tend to attribute the responsibility to the beings in which we are especially interested, namely common sense material objects like tables, cats, trees, and so on. These things, however, lie outside one's body and affect consciousness not directly, but only through the mediation of other beings.*

* cf. above, pp.19-21.

In order to clarify the situation, it is necessary to make a slight digression concerning the relations between mind, body, and external objects proper. We maintain that the mind and the body are different substances: indeed, the body associated with a particular mind is an aggregate of a very large number of distinct substances. Two points in connection with this require explanation. In the first place, the mind which we take to be a substance in its own right is something more than consciousness. Besides conscious mind, there is unconscious mind. Consciousness does not have the clear cut boundaries of an independent substance. In experience, we find a focal centre of which we are fully conscious gradually shading off into a periphery which is but dimly apprehended and which points to a background of experience of which we are not really conscious at all. Moreover, if one does not recognise the existence of the unconscious mind, there are many things which it is difficult to account for, e.g. the retention in memory of facts which one is not actually recollecting at the time.

The second point which must be discussed is the claim that the body is an aggregate of substances. Surely, it may be urged, an animal body has an organic unity not possessed by a mere aggregate such as a heap of stones. But can the unity of a number of substances be anything more than the unity of an aggregate? A more intimate unity would be the unity of a substance--and this would be incompatible with the

substantiality of the elements unified. But the various parts of the body must be independent substances, since they are not simply annihilated when separated from the body in which they are incorporated. Another difficulty for those who suppose that the body has an organic unity is the difficulty of deciding what should be included in this unity. For it is sometimes not easy to say where the body stops and the external world begins. At what precise point, for example, is food incorporated in the body?

Nevertheless, one cannot deny that there is some difference between the organisation of an animal body and the organisation of a heap of stones. This difference, however, may be explained without having to suppose that a number of substances can form anything but an aggregate. The difference is simply that the elements in a body are more dependent on their neighbours for their continued existence than are the elements in a heap of stones--the difference being a difference in degree and not in kind. Another difference is that associated with the animal body, there is an additional substance of a higher grade--a "dominant monad", to use Leibniz's terms--nothing analogous being present in the case of a heap of stones.

Therefore, since the mind and the various parts of the body are distinct substances, the relations between them are transtemporal causal relations; for these are the only direct relations which may connect independent substances. Just as the organs of the body are causally related to antecedent

events in the external world, so the conscious mind is causally related to antecedent events in its associated body. Thus, external things affect the mind indirectly by affecting the sense organs which, in turn, affect the mind through the mediation of the nervous system and the brain.

To return to the main argument, the causal antecedents of any content given in experience are extremely complicated--almost infinitely complicated. The beings which affect one directly are affected by things in their immediate past which are affected in turn by things in <u>their</u> immediate past and so on to the beginning of time. Therefore, it is out of the question to concern oneself with all factors which make a contribution, direct, or indirect, to the nature of the given sense-content. For practical purposes, however, it is not necessary to take account of all beings which indirectly affect the experiencing subject, since every member in the series of past causes sums up, as it were, the contributions of its predecessors.

But the beings in which we are especially interested are publicly observable external material objects which, as we have seen, affect the subject only through the sense organs and other physiological or physical intermediaries. Now, although we may disregard, if we wish, causes more remote than these material objects, we cannot treat external material objects as the sole causes of sense-data, disregarding the contributions of beings lying on the causal route between the material object

and the experiencing mind. If one wishes to extend one's survey to a given point, one must take account of all the intermediaries. ~~Thusxxifxmexkxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx~~

Thus, if one traces the causal antecedents of one's sense-data as far as the common sense material objects which are usually considered of primary importance, one must deal with a rather complicated situation, since there are so many intermediate factors between the external objects and the mind. One cannot specify particular material objects as the beings with sole responsibility for the character of the given sense-contents. But one can be more specific, if one attempts to identify, not the causal factors which are somehow involved in the production of sense-data, but the factors which change when there is a change in the sense-data presented to consciousness. One is usually justified in attributing changes in the given sense-content to changes in common sense material objects, since the mediating conditions generally remain fairly constant. The justification for assuming that the sense organs etc. intermediate between the external material objects and the mind will not normally change in character is the actual success of the systematic investigation of the external world based on this assumption.

We do not, however, have any guarantee that the beings through which external material objects affect the subject will never alter in character. In some cases, indeed, we have good reason to believe that these beings <u>do</u> change, and the

alteration has its effect on the experienced contents. Therefore, just as there is always the risk of error when we suppose that a content has been produced by external causes and is no figment of imagination, so there is always the possibility of a mistake when we assert that a change in the content presented to consciousness is due to a change in material things and not to a change in the mediating conditions.

The things which separate the mind and external material objects may be grouped under two headings, although there is no really fundamental difference betweeen the members of the two classes. There are the things which form part of the body associated with the experiencing mind and there are the things which do not. The members of the first class may be called the physiological conditions of perception. Now, variations in the sense-data indirectly produced by an external material object may be due to variations in these mediating physiological conditions. This point may be illustrated by adapting a well-known example used by Locke.* Lukewarm water feels cold to a hand which has been exposed to the heat, and hot to a hand which has been exposed to the cold. Therefore, the different sense-data produced at different times by a certain pail of water may be due to a difference in the condition of the hand with which one tests it, and if one believes that there has been a change in the temperature of the water, one may be mistaken.

There are always physiological conditions mediating one's

* cf. Essay Concerning Human Understanding, Book II, Chapter viii, 21.

experience of external material objects, and in some cases, there are also additional physical conditions. Except in the case of contact senses such as touch and taste, there are physical intermediaries which lie between the material things and the sense organs of the body. Thus, the sense contents produced in consciousness by material things may be altered by an alteration in these physical conditions. We may refer again to an example used in Chapter II.* A stick, which appears straight when the physical medium between the stick and the eyes is simply air, appears bent when partially immersed in water. The change in what appears to consciousness is not due to a real change in the character of the stick but to a change in the physical conditions of perception.

But these variations in the physiological and physical conditions of perception do not necessarily mislead us, since there are many ways in which they may be detected. We may correct our mistakes by further observations, and we may allow for distortions on the basis of past experience. For example, we can discover the real cause of the variation when different sensations are produced by water which has not changed in temperature by checking the readings on a thermometer. And one can verify by touch that the shape of a stick has not altered when it is put in water. It must, however, be admitted that such tests are never absolutely conclusive, although very often, they will put the matter beyond reasonable

* above, p.31.

doubt.

But the great majority of the mistakes which we make in ordinary life concerning the nature of the external world are not due to any of the causes discussed so far. They are due to the fact that we often make claims which go beyond what our observations strictly justify. If the sense content before the mind testifies that an external object has a certain quality, we often assume that the object also possesses other qualities which we have generally found in past experience to be associated with the quality in question. We also predict what will happen in the future on the basis of the regular laws discovered by experience. Thus, it is clear that we shall sometimes make mistakes, especially since the exigencies of practical life often compel us to make snap judgments without a full investigation of the situation. It may be that in a particular case quality a does not accompany quality b, even although in past experience we have always found that these two qualities go together. And although qhality c has always been followed by quality d in our past experience, this does not mean that quality d will necessarily follow the particular instance of quality c zat present before us. Quite apart from the fact that one cannot prove that the regularity of nature is necessary and complete, one can never be sure that the situation is the same in two different cases. The more thorough one's investigation of the situation, the more justification one will haye for disregarding the possibility that the interference of

unusual circumstances will bring about an unusual sequence of events, but this is always a theoretical possibility which cannot strictly be ignored.

Moreover, in practical life, we often do not base our predictions even on what we have always found in past experience: we base our predictions on what usually happens, on what happens in normal circumstances. And we either do not have the opportunity or do not take the trouble to check whether the present circumstances are normal. No one would doubt that the white oval object in the egg cup is an egg. And yet, until one tries to crack it open, one cannot, strictly, rule out the possibility that it is a perfectly made china imitation. And we often make confident assertions on the basis of much flimsier evidence than this.

From what has been said above, it is clear that there is a considerable risk of error in the case of a single, uncorroborated observation. But the risk of error can be greatly reduced, although it can never be completely eliminated, by using one observation to check up on another. The comparison of different observations makes possible a much more accurate assessment of the powers of external beings. Every content presented to consciousness is a sample indicating the powers of the external reality, and our judgments concerning the outside world may be confirmed or corrected by taking further samples. The assertions which we make about the external world on the basis of our present experience may be verified (or shown to be false)

by further observations.

There is, however, no way in which we can get evidence which will establish conclusively, beyond any possibility of doubt, the truth or falsity of a matter of fact proposition with respect to the outside world. In any particular case, one can never be absolutely certain that one is right, although the risk of error is often negligible. We cannot at present discuss the very tricky question as to whether it is even possible for the experiencing subject to be mistaken in all cases. But at least, we can point out that this does not follow from the fact that it is possible for the subject to be mistaken in any particular case. To suppose that it does is to commit the fallacy of composition.*

Our experience as a whole is generally reliable, although we may make mistakes from time to time. We have shown that the sense-contents presented to consciousness are the effects of external causes. We have not been able to prove a priori that the various methods which we use to infer the character of the external causes from the character of their effects are necessarily justified, but we have seen that the assumptions which are made are by no means unreasonable. And the absence of an a priori justification does not invalidate the methods employed: for these methods are justified by their actual success. For example, although one cannot know a priori

* cf. above, pp. 52-53, where we discuss a very similar example of this fallacy.

that natural processes will follow regular laws, the justification of this assumption is the coherent system and the successful predictions which are based upon it. These successful predictions cannot be merely fortuitous: they show that our assumptions must be in keeping with the character of the universe. We could not have foretold that our attempts to know the nature of external things would attain their actual degree of success, but since they have, in fact, been successful, no further justification can be given or should be required. One can always, indeed, entertain a philosophical doubt with respect to any proposition which is not self-evidently true or which has not been rigorously deduced from self-evident propositions, but an effective scepticism concerning the general validity of our knowledge of the external world must point to failures in prediction or to contradictory resulxts reached on the basis of different accredited methods. It is only if one is unable to resolve such contradictions by refining one's methods that one's knowledge can be said to be radically defective.

V. Although the knowledge of the external world which has now been justified is in one respect very extensive, in another respect it is extremely limited. For it has not been shown that we have any concrete knowledge of what the characters of external things are really like: all that has been established is that we can often detect when the characters of different

beings are identical and when they are different. We must now consider whether it is possible in any circumstances to form a valid idea of the real nature of external things.

We know by a direct intuition the nature of the contents actually given in consciousness but the nature of external beings cannot be known in this way. It is, however, possible to achieve some understanding of what other things are really like if one has grounds for believing that these other things are similar in character to what is presented in consciousness. We shall now try to show that there are certain similarities between our own character and the characters of other things.

The discussion falls into two main parts. First, we shallx examine the reasons for believing that all beings in the world without exception have a fundamental similarity in character. Secondly, we shall consider whether there are some other beings in the world similar in their more specialised characteristics to a given experiencing subject.

One cannot even assert the existence of external things unless one can form some positive conception of their nature. To assert the existence of something whose nature is completely unknown is impossible and meaningless. One must know, at the very least, that the entity which one supposes to exist is a thing or a being. One can understand the nature of external things, in so far as they are beings, because one is oneself a being and the meaning of this conception is given in immediate experience. This argument is, in effect, that one cannot

assert the existence of anything without supposing that it is similar to oneself in fundamental character. Now, the common sense belief in the existence of an external reality is, as we have argued, valid and legitimate. The conclusion follows that there are other beings which are not totally different in character from the experiencing subject.

Another argument confirms this conclusion. All beings in the universe must be, to some extexnt, similar in character, since they must all satisfy the necessary conditions, if they are to be included in the same universe. All beings have this in common--each is related directly or indirectly to all other beings.

We must now try to identify the absolutely generic characters which are common to all beings. What features of one's own nature can one confidently attribute to all other beings, and what features are peculiar either to a more restricted group of beings or even to oneself? At this level everything is obscure and it is impossible to be dogmatic. But it is difficult to deny that the other beings in the universe are equal to oneself in ontological status: that is, they are substantial beings and possess the characteristics involved in substantiality. They are ultimate unities which cannot be divided into real substantial parts and they are active beings with a measure of independence.

There are also several other features of our existence which we may reasonably suppose to be shared by the beings which

we encounter in the world. But we shall deal only with a characteristic which is of particular importance in our general theory. This characteristic is the relation of a being to its immediate antecedents. It is not essentially involved in the very notion of substance that a substance be directly related to antecedent beings. Indeed, if the speculations in H Chapter VI with respect to the origin of time are correct*, there must be one substance which is not related to anything antecedent. Nevertheless, our relation to antecedent beings is a fundamental factor in our character, and it is reasonable to suppose that there are a great number of other beings, related to antecedents in a similar way.

On this supposition depends our belief in indirect temporal and causal relations.** We maintain that we are causally affected, directly by things in our immediate past, and indirectly, by other things which have a causal effect, direct or indirect, on the things which affect us directly. But all we really know is the existence of the immediately antecedent beings which directly affect us. The justification for extending back the temporal series and the causal series beyond the immediate antecedents which we actually encounter is the belief that these antecedent beings are similar to ourselves, and therefore are also involved in causal relations with antecedent beings. Empirical confirmation is provided by

* above, pp. 238-240½
** cf. above, pp. 209-210.

the success and coherence of the scientific account of the world which assumes the reality of these temporal and causal series.

Since we are assuming that all beings are like ourselves in their fundamental character, it might be objected that our description of reality is too anthropomorphic. We are blurring, it may be urged, the sharp distinction between spiritual and material substances: Whatever differences in degree we may admit, we are wrong to suppose that material and spiritual substances have the same fundamental kind of activity and structure. We may retort, however, that it is really our critics who are guilty of an anthropomorphic fallacy. For the common conception of material substance is derived from the way in which external things appear to the human observer. And it is surely less anthropomorphic to say that all beings are, in their fundamental nature, similar to human beings, rather than that the things in the world really are as they appear to be from the limited and external point of view of the human observer.

Thus, certain properties which we discover in our own character may be reasonably attributed to all other beings, and the conclusion of the first part of the discussion is that we have a general knowledge of the concrete nature of other things. We must now deal with the second part of the problem, which is whether the more specialised characteristics which we possess may be legitimately attributed to <u>some</u> other beings

in the universe.

If the theory of causality developed in Chapter VII is correct, it is reasonable to suppose that there are, on occasion, similarities between an experiencing subject and beings in his immediate past; for causal efficacy is due to the persistence in the present of the character of the past. This character may certainly undergo a very serious transmutation, so that, as incorporated in the consciousness of the experiencing subject, it may be very different from what it was when it defined the nature of the external object, and it will therefore furnish no idea of what the external thing was really like. But on the other hand, the character of an antecedent cause may be reproduced by its effect without any radical alterations, and when this is so, what we find presented in our consciousness will be a good indication of the real nature of the antecedent being.

The plain man accepts, on the evidence of his memory of the past, the existence of a persistent and substantial self, which endures through time, passing through a number of transient states. We cannot admit the existence of enduring substances, as we have already explained*, but we must give our own account of the facts which the plain man is describing in this way. We replace the substantial self which maintains its identity from birth to death by a series of ephemeral

* above, pp. 289-291. Cf. also the above analysis of material objects, pp. 314-315.

substances, each of which is causally related to its predecessor, and to a large extent reproduces its character. That is, we are distinguishing two sources from which the character of a present subject of experience is derived. The character is largely derived from a single antecedent being, which common sense would regard as the preceding state of the identical self, and there are also contributions from other beings, representing the effect of the external environment. But the memory of one's own past states is not different in principle from the awareness of external things. In both cases, the experiencing subject is causally affected by antecedent beings which are substances distinct from himself.

But we cannot strictly prove that the past states of the self are similar to its present state: for one thing, we can never get into a position where we can compare past and present. To put the point more accurately , we can never prove that there is an antecedent being which may be usefully regarded as a past state of the present self. But the nature of one's present experience suggests very forcibly that there is a single antecedent being similar to oneself from which much of the given content is derived. The plain man, at least, has no doubts about it. And in this case, there are no philosophical reasons which lead one to dispute the verdict of common sense. Causal connection, we have argued*, is essentially the persistence of the character of the past in the present.

* above, pp. 260-263.

Usually, the elements in consciousness are not similar to the causes by which they are produced. The characters re-enacted are radically altered in the proceds, because they are included in an organic unity which is very different from the organisation which they originally constituted. But when the present state of the self incorporates the characters of the preceding state, the usualk transmutation will not necessarily take place, because the new context in which the characters of the past cause are preserved is basically similar to their original context. This means that although the contents presented in consciousness usually give no idea of the nature of other things as they are in themselves, there is one case which is an exception. The past states of the self were roughly similar to its present state, and we are not forced to refer to our own past states as merely the unknown correlates of certain effects in our consciousness.

Thus, in memory, we are aware of the real nature of certain past beings, viz. the past states of the self. When I say, "Yesterday I saw a red patch", I know what my past experience was like. I am not simply identifying its character with the equally unknown character of another being, on the basis of the similar effects which the two things produce. Granted, our memory of our past states, like our knowledge of the external world is certainly fallible: our picture of the past may be mistaken. But when our memory of our past states is accurate, we do have a genuine picture which reproduces the concrete detail of the

past. We have more than an abstract scheme of differences and similarities, which is what our knowledge of the external world amounts to.

Having introduced the topic of memory, we shall now discuss briefly some of the main problems in connection with the memory of the past, and we shall show how these problems are to be answered in terms of the present system. Also, we shall now consider, as promised above, the discovery of the temporal order in the universe--a discovery which is dependent on one's memory of the past.

The problem of memory would seem to be particularly baffling if one refuses to assume a persistent self which might somehow preserve what happened in the past and in this way make possible the recollection of past events. But nevertheless, our theory is in a strong position, because we can admit that an experiencing subject has a direct experience of the past. All experience of other beings is an experience of past beings, which is possible in virtue of the contiguity of the present and the immediate past. It is only if one supposes that the objects of normal experience are contemporary beings that one has to maintain that the experience of the past is a second and special kind of experience.

We directly experience, however, only our immediate past, and memory is usually a memory of what has happened in a past which is comparatively remote. But granted a direct experience of the immediate past, an indirect experience of the remote past

is also possible. For each of the constituent substances in the series which is equivalent to the self or person may pass on to its successor what it has learned from its predecessor. We can also get information about past events which are not members of the series which constitutes the self. For each member in this series experiences an external world, and he may transmit to his successors what he has discovered about it.

But even if a knowledge of what has happened in the past may be handed down to a present subject in this way, how can one tell which of two past events is the more remote? This is the problem of arranging the past in a temporal system. The answer to the problem is that the past experiences accumulated in the present do not form a completely unorganised collection. Every member in the series which makes up the identical person organises his experience, contrasting what has been transmitted from the preceding member with what has been contributed by other sources. Therefore, there is a distinction between what has happened at different times, in the material which he transmits to his successor, and this distinction the successor retains, adding in turn a fresh distinction. If it is argued that this series of distinctions would soon become too complicated to be retained without the blurring of the earlier distinctions, one may reply that this is what we actually find happening. One's knowledge of the comparative remoteness of past events is not very accurate or extensive unless one invokes the aid of special devices. We can often tell which

of two events is the more remote because we know the natural order of a larger process in which they are both included. For example, one knows that one's arrival in a certain town, visited only once, must have preceded one's departure, even if both events feel equally remote. And men have used regular and recurrent processes in the universe to establish an objective and systematic measure of past time, namely, the cycle of the seasons and the sequence of day and night. It is possible to fix exactly the time when something has happened by remembering its date, that is, by associating the event with a certain conventional number in the system determined by the revolution of the earth on its axis and the revolution of the earth around the sun.

There is one final objection to our accoynt of memory which must be answered before we pass on to the next topic. According to our view, a subject can remember only what has been handed on by his immediate predecessor. But one can often remember, it seems, things <u>not</u> present to the consciousness of the antecedent state of the self. One can even remember, on occasion, what one's past self has previously tried to remember without success.

The answer to this objection is that the subject is not necessarily conscious of the elements he retains in his memory and transmits to his successors. There is a common sense distinction between what one is actually recollecting or remembering and what one somehow retains in one's memory.

We normally believe that our memories retain a great deal of information of which we are not conscious at the moment, although this information could usually be produced on demand. This retention of information in the unconscious background of experience will embarrass only those who believe that an experiencing subject is no more than his consciousness--a view which we have explicitly rejected.*

Thus, there is a great deal of justification for the belief that one's present self is a member of a series of causally connected beings which are, to some extent, similar in character--the series constituting what the plain man would describe as an enduring person. Now, if one is aware that there are certain past substances in the route of one's personal history in some respects similar to one's present self, one has a concrete, if partial, knowledge of what these past substances were really like in themselves.

We must now consider whether there are any other beings like oneself in addition to the constituents of one's own personal history. We normally believe that there are--that there are many other people like ourselves in the world. How is this common sense belief in the existence of other minds to be explained and justified? What entitles one to suppose that there are other beings similar to oneself, not only in respect of the general characteristics common to all beings, but also in respect of certain special characteristics, such as

* above, p.327.

consciousness, which one would not think of attributing to all beings without exception?

There are two distinct sources of the common sense belief that there are other conscious beings in the world. We may distinguish these two sources by calling them the a priori and the empirical sources of the belief in other minds. What we are calling the a priori source is the belief that it is too great a presumption to suppose that one's character, leaving aside the generic characteristics common to all beings, is completely different from the character of everything else. The empirical source is the observation that there are other bodies in the world similar in structure and behaviour to the body associated with one's own mind.

The empirical evidence is essential if one is to locate the other beings in the universe which are similar to oneself. Nevertheless, the a priori source of the belief in other minds is ~~xmp~~ also important, and should not be underrated. One cannot test directly the influence of the a priori source, since it can never be isolated. No one can avoid noticing the similarity of his body and the bodies of other people and therefore the a priori belief that one's consciousness cannot be absolutely unique never occurs by itself. But there are ways in which its influence may be indirectly detected. The common sense belief in the existence of other minds would not be so confident as it is, were it not for the influence of the belief that somewhere there must be other beings like oneself.

First, the argument from analogy is not sufficiently strong to justify the extreme confidence of the belief in other minds. Secondly, this argument would seem to be too abstract and difficult to be the ground of so natural and widespread a belief, if one did not already suppose that the existence of other minds was a likely hypothesis. Moreover, there is further evidence of this native tendency in the experiencing subject to suppose that there are other beings like himself, if we consider the readiness of primitive man to attribute personality even to things which do not possess a body analogous to that of human beings. Primitive man personified the wind, the moon, and the sun. It is critical reflection which has restricted consciousness to beings with bodies similar to our own.

It is not, however, a matter of great importance to determine the actual contribution made by each of these two sources to the common sense belief in other minds. What is of more importance is to assess the strength of the two arguments which may be used. First, what justification is there for the belief that somewhere in the universe there must be other beings like oneself? It is unduly arrogant, one feels, to suppose that nothing else in the world is at all like oneself and that no other being has been accorded the privilege of consciousness. But can this natural feeling be defended by an argument which, even if not conclusive, is at least plausible? We must now try to show that it can.

The beings in the world are not all completely different

in character. We can infer from the similarity of effects produced in consciousness that in addition to the general characteristics shared by all real beings, there are other more specific characteristics common to the members of certain groups. We often encounter two beings which are radically different in character, but it is rare to encounter a being which is completely different from everything else which we have ever experienced. Now, since most beings in the world are members of one or another class of roughly similar beings, it is not likely that one's own consciousness is an exception to this general rule and that no other beings like oneself exist.

We must now consider the second argument. How close is the analogy between the body associated with one's mind and certain other bodies in the world and does the analogy justify the conclusion that there are minds associated with these other bodies also? It is clear that there are many other bodies in the world very similar to our own in both structure and behaviour. There are many human bodies, including our own, which have similar sense organs and a similar anatomical structure. Therefore, one may suppose that there is a conscious mind associated with each of these bodies. The argument is not particularly strong, for the inference depends on a correlation observed in only one case. But the argument is greatly strengthened if one also takes account of the similar behaviour patterns exhibited by human beings. The similarity of some behaviour patterns, namely purely physiological processes such

as breathing, does not add much to the argument from structural similarity, but there are other similarities in human behaviour which are of more importance. Human bodies often appear to respond to their environment in an intelligent way. In one's own case, such a response is attributed to the direction of one's conscious mind. There is a real connection, and no mere accidental correlation, between "intelligent" behaviour and the intelligent mind which is responsible. Therefore, in the case of other bodies too, it would seem that conscious minds are essentially involved whenever there is "intelligent" behaviour. This "intelligent" behaviour can take many forms, but most important are the various kinds of communication. The fact that we can communicate successfully with other human bodies is strong confirmation that associated with each of these bodies, there is a conscious mind like our own. From other people, we get information which checks show to be fairly reliable, and when we communicate with other people, they usually react in a way which shows that they have understood what we have said.

But although other people often act in a way which we naturally suppose to indicate the influence of a conscious mind, the evidence is not conclusive. For it is always possible that the effects we observe are produced in other ways. Similar effects sometimes have very different causes. One can never be absolutely ~~mux~~ certain that the "intelligent" behaviour which we observe has not been produced without anything corresponding to our consciousness being involved.

Robots have actually been devised which can imitate a great number of human activities without possessing human consciousness.

Nevertheless, it is unlikely that we are ever mistaken in asserting that there is a conscious mind associated with a body whose behaviour we have had the opportunity to observe at all closely. And it is much more unlikely that we are always mistaken when we suppose the existence of other minds. The existence of other minds cannot, indeed, be demonstrated on the basis of the evidence available, but the combined strength of the two arguments which we have examined is sufficient to put the matter beyond reasonable doubt.

But does one know only that there are other conscious minds, or does one also know, on occasion, the particular nature of the experiences which these other minds enjoy? We often suppose that we have some knowledge of the specific character of the experiences of other men. We have evidence which suggests that certain other men are undergoing experiences similar to experiences which we ourselves either have at present or have had in the past, so that we know, to some extent, what the experiences enjoyed by these other men are like. We shall now investigate the nature of this evidence and we shall attempt to discover how far it establishes the conclusions which are usually drawn from it.

We have two sources of evidence with respect to the character of other people's experiences. The first kind of

evidence is our own experience of the situations in which other people are placed. The second kind of evidence is the reports which other people make concerning the nature of their experience To take an example, we have reason to believe that a man is having the experience which, in our own case, we would describe as "seeing a red patch" either if we know that there is a red object before his eyes or if he announces that he is seeing a red patch.

Neither of these two sources of evidence is, however, by any means conclusive. Suppose that there is an external object which produces in one's consciousness a sense-datum of a certain kind. One may suspect, but one has no means of knowing that this object will produce similar sense-data in the consciousness of other observers. And not infrequently, the evidence suggests that the sense-data produced are not similar. A surer indication of the character of the experience undergone by another subject is the description which he communicates to other people. When someone says that he is seeing a red patch, we believe that we know the nature of his experience, because we have also seen red patches. But on reflection, we are compelled to recognise that the experience which we describe as seeing a red patch is not necessarily the same as the experience which another observer describes as seeing a red patch. If different observers are to communicate successfully with one another and to convey information about the external world, it is not essential that external beings

should affect different observers in exactly the same way. All that is required is that objects which produce similar sense-data in the consciousness of one observer should produce similar sense-data in the consciousness of other observers. On the basis of the similar sense-contents which we find in consciousness, we infer that certain external objects have similar qualities. We can provide information which will be useful to others, if these similar external beings have a similar effect on other observers, even if they do not affect others in the same way as they affect us. A public language is gradually built up to describe the various similarities among external objects, and for this language to be accurate and successful, it is not necessary for the evidence of these similarities to be the same in the case of every observer. A red object in the external world may produce one sense-datum in one observer and a very different sense-datum in another. But so long as this sense-datum was never presented to the one observer without the corresponding sense-datum being presented to the other, the two observers could communicate with perfect success, and would never suspect any difference in their experiences.

But although it is quite consistent with the observed facts to say that everyone who claims that he is seeing a red patch has an experience different from that of everyone else, it does not seem a likely hypothesis that there should be so great a variety. The a priori argument which suggests that

inxxmixxxxituatimnx there are other conscious minds like our own also suggests that in similar situations these minds have experiences similar to our own, so that we are often justified in claiming that we know what other people are experiencing. X But although it is unlikely that quite different sense-data are presented to every subject who "sees a red patch", it is not so unlikely that there should be some exceptions to the general rule. We can sometimes detect cases where subjects do not see the same colours when confronted with the same objects. Tests have shown that some people, although not strictly colour blind in the sense of seeing everything in black and white, cannot discriminate between certain colours. These people must see at least one of the colours in a different way from the normal observer. Now, if there are these differences in cases where we can make tests, is it not likely that sometimes there are also undetected differences in cases where no tests are possible?

Thus, if we claim that we know the nature of another man's experience, there is a considerable risk that we are mistaken, even if we have taken every precaution and have checked what can be checked. For although it is very unlikely that in the same situation, everyone experiences different sense-data, it is quite possible that not all observers experience the same sense-datum. And since we have no means of telling which observers will regularly have the same sense-data as ourselves and which observers will not, there is always

a significant risk of error. We cannot be quite so confident that we know exactly what another person is experiencing on a particular occasion as we can when we simply assert the existence of other m conscious minds. But the evidence is not sufficient even to permit an accurate assessment of the risk of error.

VI. The argument of the thesis is now completed and we shall review briefly the main points which have been made. The central purpose of this thesis is to vindicate a certain fundamental common sense belief which is at the basis of both Epistemological Realism and Metaphysical Pluralism. This is the implicit belief of every man that he is a substantial being who experiences other substantial beings existing in the same universe. The two main positions which we defend, Epistemological Realism and Metaphysical Pluralism, have, approximately, an equal importance in this work. This means that the subject matter of the thesis is divided about equally between the disciplines of epistemology and metaphysics. Roughly, Chapters II, III, and VIII deal with epistemological problems and Chapters I, IV, V, VI, and VII deal with metaphysical problems. But Metaphysical Pluralism and Epistemological Realism are very closely connected, since they both depend on the same fundamental common sense belief, and one cannot always clearly separate what is relevant to the one topic and what is relevant to the other.

We began by explaining what is involved in Metaphysical

Pluralism. Then, we defended the common sense belief in the existence of external objects against the criticisms which are based on the fact that the contents given in consciousness cannot be real characters of external beings. We argued that even if the sense-data presented to consciousness are neither external nor independent, this does not preclude the possibility that the experiencing subject has an awareness of external beings over and above the inspection of sense contents. This primitive awareness of external beings is not a special experience which may be isolated by introspection: rather, it is a factor involved in all experience and it is to be detected by analysis. An unprejudiced survey of the structure of experience reveals that experience is not simply the inspection of sense-contents, as has often been supposed, e.g. by Phenomenalists. Experience is essentially the reference of presented sense-contents to an external reality. The only mistake of Naive Realism is the supposition that this reference involves the assertion that the sense-contents are physical parts of the external reality.

The next problem was to defend the belief that the experiencing subject and the objects experienced are independent substances. We examined Bradley's view that neither subject nor object are independent beings, the only independent substancex being the universe as a whole. Then we tackled the two most fundamental problems involved in Metaphysical Pluralism, namely, "What is responsible for the uniqueness

of every being?" and "What is responsible for the togetherness of all beings in a single universe?" The answer to the first problem is that every being is responsible for its own uniqueness. We showed that attempts to explain this feature of a being's existence in other terms are not successful.

The second problem is of particular importance, since it must be solved if one is to answer the chief remaining objection against Metaphysical Pluralism from the Monistic point of view. Bradley maintains first, that an independent substance cannot be related to anything beyond itself, and second, that a plurality of completely unrelated entities is impossible. Our answer is that two beings can be related without damaging their substantial independence if the relation between them is an asymmetrical internal-external relation. This abstract possibility is given a concrete application by showing that the relations between a present being and the beings in its immediate past are internal-external relations. This means that the relation which is responsible for connecting independent substances in a single universe is also responsible for the generation of the temporal continuum. An important corollary is that there can be no direct relations between contemporary beings.

In the following chapter, we argued that this trans-temporal relation between a being and its immediate antecedent is also the relation of causality. But although all beings are causally affected by antecedent beings, it does not follow that the nature of a being is completely and necessarily

mmmmmmmrity determined by the nature of its antecedent causes. Our analysis of causality revealed one most important fact, that causal connection is due to the persistence of the character of the past cause in the present effect. This means that universal characters are essentially involved in the fundamental relations which connect independent substances. Thus, we have established the existence of the identities in difference which must be assumed if one is to account for the element of permanence in a changing world and for many other facts of experience.

In this final chapter, we have shown that the relation between experiencing subject and experienced object is identical with the fundamental relation between independent beings. Since this relation is also the relation of causality, we have been able to propose a version of the causal theory of perception which is not exposed to the usual objection. Then, we made an examination of our empirical knowledge, explaining its justification. We noted that empirical propositions are never indubitable, but that this was not a serious weakness, since the risk of error is often infinitesimal.

The metaphysical system which we have constructed is not, however, complete and impregnable. We have attempted to describe the general character of the world of finite beings, but our description suffers from several weaknesses and limitations. In the first place, there are many relevant topics which we were unable to discuss. What is probably

the most important omission is that we have neglected final causality and purpose: we have treated the human subject as an observer and not as an agent. We are hopeful that the factors in human experience which we have not considered can be accomodated without any serious modification of the original system. The system is certainly incomplete, but it may be accurate as far as it goes. But unless one actually shows in detail how these features are to be fitted in, one cannot be sure that the system will not have to be radically altered in order to take account of the new evidence.

Secondly, many of the topics which we have discussed have not been examined in sufficient detail. This is particularly true in the case of the present chapter. We have been trying to show how the main problems of epistemology can be dealt with in terms of our metaphysical hypothesis, but our account is a mere sketch, and considerable refinements would have to be introduced before we could claim that our epistemological theory was reasonably adequate and comprehensive.

The third weakness of the system is that we have had to assume certain principles which are not self-evidently true and which may be false. The system which we have put forward is no more than a hypothesis--a possible explanation of the facts of experience. We may claim that the principles assumed are usually not implausible and that the description of the universe is fairly satisfactory, but we are not entitled to claim that the truth of the system has been conclusively

established.

Unless one subscribes to the Cartesian view that a philosophical system can be demonstrated on the basis of self-evident first principles, one will admit that this is a weakness inevitable in any system. A system is to be judged by the coherence and plausibility of its assumptions and by its adequacy to explain the facts. But because the theory which we have suggested is no more than a hypothesis, a fourth weakness in the system must be conceded. If one constructed a theory whose truth could be demonstrated, any examination of the theories of other philosophers would be, strictly, irrelevant. But if one is advancing what is only a plausible hypothesis, it is necessary to consider the hypotheses suggested by other philosophers and to show that they are less and not more plausible than one's own. At various points, we have discussed at some length positions held by Descartes, Bradley, and Kant, but in the history of philosophy, there are many other alternative systems which we have not even considered.

Having outlined the main defects of the metaphysical system developed in this thesis, we shall end on a positive note by drawing attention to what we consider its chief recommendation--the coherence and simplicity of the system as a whole. The solution offered to the fundamental problem with which a metaphysical pluralist must deal--the problem of explaining the togetherness of a number of independent

substances---has made possible the solution of several other important problems. The relation which connects beings without destroying their independence is responsible for the generation of the temporal continuum. The very same relation is also the basis of causal connection. And involved in causal connection, there is an identity in character between cause and effect which explains the element of permanence in a changing world and the universal identities in difference presupposed by general concepts. Again, this fundamental relation between independent beings is also the basis of the relation of experiencing, and it explains the subject's knowledge of an external world.